THIRD SERIES VOL 64 NUMBER 5 MARCH 1957

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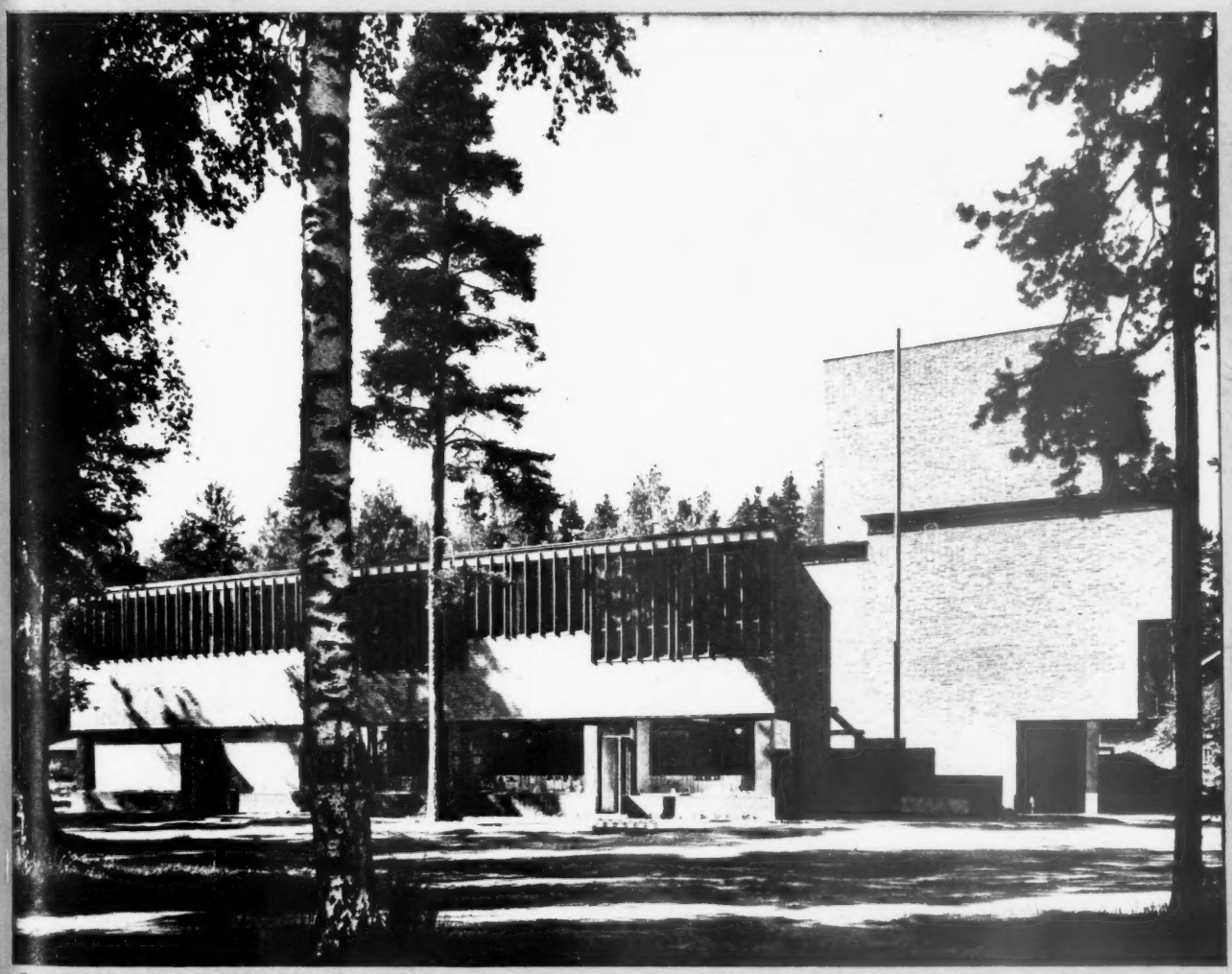
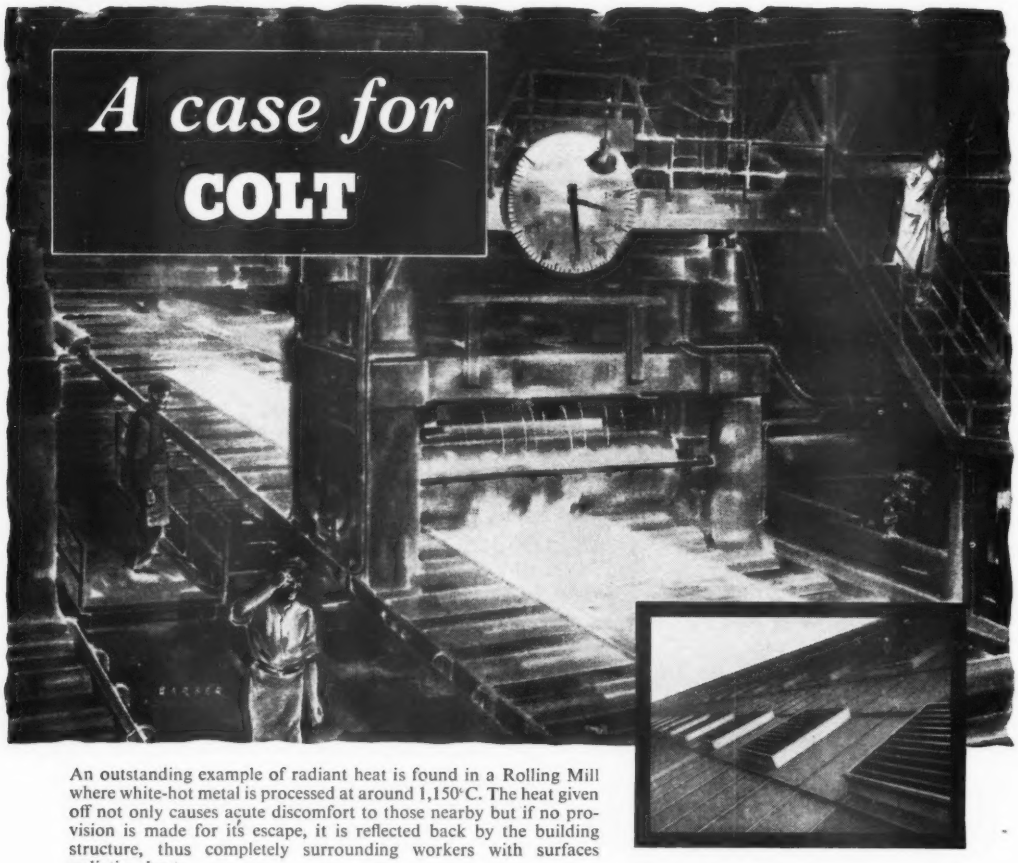


Civic Centre, Säynätsalo, 1951. Alvar Aalto, Architect

Problem No. 7 Intense radiant heat

A case for COLT



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MARCH 1957 THIRD SERIES VOL. 64 NUMBER 5 TWO SHILLINGS AND SIXPENCE

EDITORIAL

R.I.B.A. Annual Discourse

The Council, on the recommendation of the Public Relations Committee, have given approval to the establishment of an annual lectureship to be known as the R.I.B.A. Annual Discourse. This will enable the Royal Institute to invite distinguished designers and scholars of world-wide reputation and it is hoped that in time the Annual Discourse will rank as one of the important events of the year. Alvar Aalto, who speaks excellent English, is to give the first lecture in this series, which will take place on Wednesday 10 April at 6 p.m.—the day following the award of the Royal Gold Medal. The Discourse is expected to draw a very large audience.

R.I.B.A. Dinner

Five hundred and seventy-seven members and guests were present at the Annual Dinner held at the Dorchester on 27 February. A large number of distinguished guests included Earl Attlee and the Lord Mayor and the Lady Mayoress.

The President, Mr. Kenneth Cross, who was accompanied by his niece, Miss Jenifer Cross, had to announce that owing to bereavement Mr. Henry Brooke, Minister of Housing and Local Government, had not been able to come, and that his place as principal speaker was being taken by the Permanent Secretary of the same Ministry, Dame Evelyn Sharp. Dame Evelyn's speech was very well received with frequent applause and laughter, as were all the speeches. They are fully reported elsewhere in this issue.

Le Nouveau Visage de la France

Speaking in French, Mr. Gontran Goulden [*A*], President of the A.A., gave an interview on the exhibition to M. Jaques Chattard of the B.B.C. French Service in the Council Room, to the accompaniment of noises off from the rebuilding of No. 68. A recording of the interview was sent out on Sunday morning, 24 February, on the European Service.

Asked by M. Chattard what most impressed him in the exhibition, Mr. Goulden said the industrial projects, which were the result of collaboration between architects and engineers. On the housing, Mr. Goulden commented that some of the blocks of flats shown had introduced into the countryside a rather urban atmosphere, and on the churches that he thought them rather lacking in 'L'esprit spirituel'.

Mr. Pembroke Wicks

It is with great regret that the JOURNAL records the death of the Registrar of A.R.C.U.K., Mr. Pembroke Wicks, C.B.E., LL.B. [*Hon. A*], at his home at Walton-on-Thames on 27 February, quite suddenly. He would have been 75 in April. Mr. Wicks was appointed Registrar in 1936.

The R.I.B.A. was represented at the funeral by Mr. Howard Lobb, C.B.E. [*F*], and Mr. Everard Haynes.

Sir Ian MacAlister

Old friends of Sir Ian MacAlister will be sorry to learn that he is critically ill as a result of a serious fracture sustained on 3 February.

Nouveau Visage de la France exhibition, which closes on 23 March.

Vignette from the Drummond-Stewart Collection, R.I.B.A.

Architecture in Finland Exhibition

An exhibition of Finnish Architecture is being designed by the Museum of Finnish Architecture specially for showing at the Royal Institute. Its presentation will coincide with Alvar Aalto's visit to this country and the indications are that it will be an exhibition of great interest, splendidly presented.

Symposium on the Constructional Use of Timber

The second evening Symposium of the session organised by the Science Committee will take place at the R.I.B.A. on Tuesday 16 April, at 6 p.m. Mr. Thomas Mitchell, M.B.E., B.Sc. [*A*], will be in the Chair.

The subject, "The Constructional Use of Timber", will be covered by five principal speakers under the following headings:—

1. *Houses and Flats*, Mr. A. W. C. Barr [*A*]; 2. *Schools and Other Buildings*, Mr. J. C. Stillman [*A*]; 3. *Building Systems*, Mr. R. T. Walters [*A*]; 4. *Economics, with special reference to lamination and prefabrication*, Mr. R. M. Hemmings, of Samuel Elliott & Sons (Reading) Ltd.; 5. *External Finishes*, Mr. A. C. Oliver of the Timber Development Association.

Slides will be shown. After the speakers there will be a general discussion from the floor.

No tickets are required for the meeting, which is expected to last until about nine o'clock.

Symposium: Family Life in High Density Housing: With particular reference to the Design of Space about Buildings

A one-day Symposium, under the above title, is being arranged jointly by the Public Relations Committee and the Town and Country Planning and Housing Committee and will take place on 24 May 1957.

Whilst the design of blocks in high density housing has received a great deal of attention, the new social problems arising from this type of housing condition seem to have been largely neglected. The object of the Symposium will therefore be to discuss the problems connected with the design of spaces between the buildings in high density housing schemes, with particular reference to the problems created by family life under these conditions.

Further particulars about the Symposium, together with a list of the speakers taking part, will be announced in the April issue.

Fifth Factory Equipment Exhibition

The Royal Institute is taking space at the Fifth Factory Equipment Exhibition to be held at Earls Court from 29 April to 2 May, for which a stand has been designed to display an exhibition entitled 'Industry and the Architect'.

Consisting of models and photographs, this exhibition will illustrate the architect's contribution in the field of industrial building and will include sections on structure, heating, lighting, renovation, welfare, landscaping and the functional use of colour. The exhibition will illustrate both large and small factories and in addition extensions to existing ones.

Free tickets of admission to the exhibition are being made available to Members and one is included with this issue of the JOURNAL.

Plan before you Build

It has been the experience of the building industry that if jobs are not properly planned before work is started, completion is delayed and costs are increased.

This point has been reiterated by every working party and committee on the efficiency of the industry since the war, and pre-planning is generally held to be one of the principal assets in the fight against rising costs.

The industry itself is pretty well converted to pre-planning. It remains to convince those who put building work in hand that it pays to be patient. The Joint Consultative Committee of Architects, Quantity Surveyors and Builders has had prepared a booklet in which the case for pre-planning is argued. Copies are being distributed in large numbers to local authorities, government departments, and industrialists, and a copy is inserted in this JOURNAL.

Extra copies may be obtained at 4*s.* 6*d.* a dozen post free from the Joint Consultative Council.

Contract Drawings

Following representations which had been made to them, the Joint Consultative Committee of Architects, Quantity Surveyors and Builders wish it to be known that they fully endorse the terms of the following Practice Note, which was issued by the Joint Contracts Tribunal in 1953:—

> In the Articles of Agreement in the R.I.B.A. Standard Form of Contract (where Quantities form part) it is recited that the drawings showing the work to be done, therein referred to as the Contract Drawings, and the Bills of Quantities describing the work to be done, have been signed by or on behalf of the parties to the Contract.
>
> It is suggested by the Joint Contracts Tribunal that in addition to these signatures it might be desirable as a matter of practice that the Contract Drawings should also bear the signature of the Quantity Surveyor named in the Contract, as evidence that the Contract Drawings were those from which he had prepared the Bills of Quantities forming part of the Contract.

Honours

In the Birthday Honours List of 1956, Mr. Horace G. White [*L*] was awarded the M.V.O. Mr. White's name was not included in the list published in the JOURNAL for June 1956.

R.I.B.A. Prizes and Studentships

On the invitation of the President R.I.B.A., Mr. Peter F. Shepheard [*A*] has undertaken to give the Criticism of the drawings submitted in competition for the R.I.B.A. Prizes and Studentships, 1957–58.

Mr. Shepheard's Criticism will be delivered at a General Meeting of the Institute to be held in February 1958.

The Building Exhibition

Her Majesty the Queen has graciously given her Patronage to the Building Exhibition, which will be held at Olympia for the fiftieth year from 13–27 November.

Mr. Kenneth Cross is President of the Exhibition.

A.B.S.

The following lucky numbers printed on the inside of the cover of the 1956 A.B.S. menu have drawn free tickets for this year's ball, to be held on 11 December at Grosvenor House.

99, 312 and 717

Holders of these should contact the Hon. Organising Secretary, The Architects' Benevolent Society, Ball Committee, 55 Pall Mall, S.W.1.

Fourteenth Report of the Royal Fine Art Commission

In their Report to Her Majesty the Queen for 1955 and 1956, the Commission say that although they have continued to advise on an increasing number of questions of public concern, these represent only a fraction of the problems affecting amenity on which advice is urgently sought. They conclude by saying that there is a limit to what can be done by the Commission as at present constituted. The sixteen members, who give their services voluntarily, are all busily engaged on other public or private affairs, and they have a paid staff of only three. 'A measure of expansion and reorganisation may be necessary if it is to do much more. And much more needs to be done.'

'Anyone', says the Report, 'with the smallest interest in the problem of amenity, must be shocked at the damage being done up and down the country, not only by the continued destruction of buildings of historical interest, but by the low architectural quality of much new work and by unsightly developments of all kinds.'

More could be done by statutory authorities and by the public. In most cases the powers are there, but are not always fully used or to the best advantage. It is often assumed that if unwelcome changes have been made, it is because there are no alternatives. It is the experience of the Commission that firm opposition on important issues does produce an alternative solution in the end. The problem of high buildings has exercised the Commission, who consider that any high building, if ill designed and wrongly sited, might overshadow fine streets and buildings, or destroy a famous skyline. 'The rights of the man in the street deserve the same consideration as those of the man in the office, or his landlord.' Cases are given where high blocks are appropriate and where not.

The Commission regret the rejection of the winning design by the promoters of the limited competition for the redevelopment of the Gaiety Theatre site, and say that the design being carried out will do nothing to mitigate the overpowering effect of the Bush House group on the historic buildings opposite in the Strand.

Another area in London where a more positive architectural character is in danger of being lost is Bloomsbury. The Commission are to discuss the general plan of development with London University and the L.C.C.

The Report also mentions the Holford scheme for St. Paul's precinct, now with the Minister of Housing and Local Government, and considers that if any changes are to be made, Sir William Holford himself and no one else should make them.

The redevelopment scheme for the Imperial College site, which leaves Collcutt's tower standing, is regretted. A more sympathetic approach at the outset, it is felt, might have found some use for the rest of the main block.

On the subject of the Metropolitan Cathedral at Liverpool, the Commission's view is that if the original design is no longer practicable, a new start should be made. 'It would be deplorable if a mere caricature of the Lutyen's design were erected.'

The Report gives the Commission's views on the proper relation in urban areas between new buildings and old ones, both in siting and design. Except in new towns and other special cases, new buildings should not be treated as the first instalment of an entirely new piece of civic design, with the implied suggestion that we must put up with the resulting muddle until the whole area has been rebuilt, since this may never happen. 'Each generation will have its own ideas, and in England particularly it is this variety which gives interest and vitality to our towns and cities.'

The general height and massing, and above all the silhouette, are more important than elevational treatment. The effect of large buildings on their outskirts can completely alter the scale of cities, even when the buildings are well designed.

Universities, says the Report, have great opportunities to set an example in good civic design both around and within many of our large cities.

The Commission consider that the most important planning question with which they have been concerned is that of the new road proposals for Oxford. They opposed the relief road through the University Parks and were gravely concerned at the possibility of a road across Christ Church Meadows.

The siting of some power stations has been criticised by the Commission, who have not been able to prevent some unfortunate choices, but they have agreed to advise the Central Electricity Authority on the detailed designs.

R.I.B.A. Diary

TUESDAY 9 APRIL, 6 p.m. General Meeting. Presentation of the Royal Gold Medal.

THURSDAY 11 APRIL—THURSDAY 2 MAY. Exhibition of Architecture in Finland in the Henry Florence Hall. Mon–Fri. 10 a.m. to 7 p.m., Sat. 10 a.m. to 5 p.m.

MONDAY 15 APRIL, Library Group. *Some Nineteenth-Century Towers*. Frank I. Jenkins, M.A. [*A*].

TUESDAY 16 APRIL, 6 p.m. Symposium on *The Constructional Use of Timber*.

Nouveau Visage de la France

Opening of the Exhibition by H.E. The French Ambassador at the R.I.B.A., 20 February. The President, Mr. Kenneth Cross, in the Chair

The President

MR. MAYOR, MY LORDS, LADIES AND GENTLEMEN. We are honoured this afternoon by the presence of His Excellency the French Ambassador, M. Chauvel, who has kindly consented to open an exhibition of photographs, beautifully presented, of modern French architecture.

In England it is I think generally recognised that everyone has his second country and that second country is, of course, France. The reasons for this are not difficult to find. France has scenery of infinite variety and great beauty and her people are the most civilised on earth; it therefore follows that her art is incomparable.

The fortunes of our two countries have been bound together for nearly one thousand years in peace and war and the cultural debt that we owe to France can never be repaid. After the terrible ravages of two world wars France is again rebuilding her cities and villages, her devastated cities, her devastated countryside—with what effect these photographs will show.

We welcome here M. Petit, an ex-Minister of Reconstruction who was a warm supporter of Corbusier, and we also extend a warm welcome to M. Marrast, President of the French Academy of Architecture, who has come over here specially from Paris to be present this afternoon.

We are indeed sorry that M. Calsat, designer of the exhibition, is not able to be present, nor is M. Varin, the Cultural Counsellor at the Embassy in London, who unfortunately had to undergo an operation last week. I should like to pay a special tribute to three young French architects who came over here in order to arrange the exhibition and who have, as I understand it, worked continuously for four days and nights, practically without sleep, in order to get it done in time. I feel that a special word of thanks is due to them.

Your Excellency, I have great pleasure in asking you to declare this exhibition open.

His Excellency the French Ambassador, M. Jean Chauvel: Mr. President, Ladies and Gentlemen, I know very little about architecture but I am very much interested in the products of the art, for which I see two reasons. The first is that my own son is a budding architect and a student of our 'École des Beaux Arts'. The second is that I, like all of you here, am a user—and I wish there was a real and efficient users' association. As Ambassador, I have spent an appreciable amount of time trying to remedy the defects, various and numerous, of the buildings in which it has pleased my

Government to encase their representative. And that has kept me thinking: why not start at the very beginning? Meaning, when the house is being planned.

I think that I may say without any more introduction that it was a very good idea to organise this exhibition of the French realisation in architecture since the war. I really believe that the achievements of our architects during the past ten years are noteworthy and very interesting to consider in the field of housing as well as in that of industrial and cultural realisations.

The reasons for this development of the art are various. Some are rather sad: many towns in our country, ás in Britain, were severely damaged during the war, and France has had to make a tremendous effort of reconstruction which is not yet completed, and at which M. Claudius Petit, who has very kindly consented to be with us this afternoon, presided for many years with great competence and success.

But this sad fact has allowed our architects to conceive plans on a very large scale and to renew, in a manner which would have been impossible in other circumstances, the aspect and shape of several of our cities.

The other reasons are happier: they are the increase of our population and the development of our economy which have created the necessity of extending our built-up areas.

Having to redesign our towns, our architects had to solve several problems.

They had, first, to build houses and flats, 'des unités d'habitation' as we say, which were in accordance with the necessities of modern life, light, practical and easy to live in. But they had also to group these flats and houses in centres; in a word—town planning.

As you know, while you prefer small houses disposed in harmonious *ensembles*, we in France go in for rather large buildings, even in residential districts. These buildings have been erected as far as possible in the midst of open areas. Each district constitutes a whole, with its stores, its gardens, its schools and hospitals, and its places of entertainment, and as far as possible industries and factories have been completely separated from the residential parts.

You will see different aspects of this reconstruction with photographs of Le Havre, Nantes-Rezé, Résidence du Parc at Croix, and Commercy, etc. Streets, as we know them in our 19th-century cities, have disappeared and make room for large avenues and buildings scattered in gardens and open parks.

You will not, I am afraid, see plans for an Embassy in one of the newly recognised capitals such as, shall we say, Cardiff.

But the attention of our architects has also been attracted to public buildings which allow rather more elaborate action. But there are here presented several realisations in the field of hospitals, universities (especially in Caen and in Paris), civic centres, churches and even the Grand Théâtre de Caen or the Monastery of La Clarté Dieu at Orsay.

I should also like to call your attention to another and quite different aspect of the work of French architects. I mean their realisations of public works, several reproductions of which you will see in this exhibition: dams, especially the projects of the tidal power station of the Rance, and factories.

You will see for yourselves these various realisations which, as I said, are, I think, notable, but I wish, before the formal opening of this exhibition, to thank all those who have contributed to this achievement.

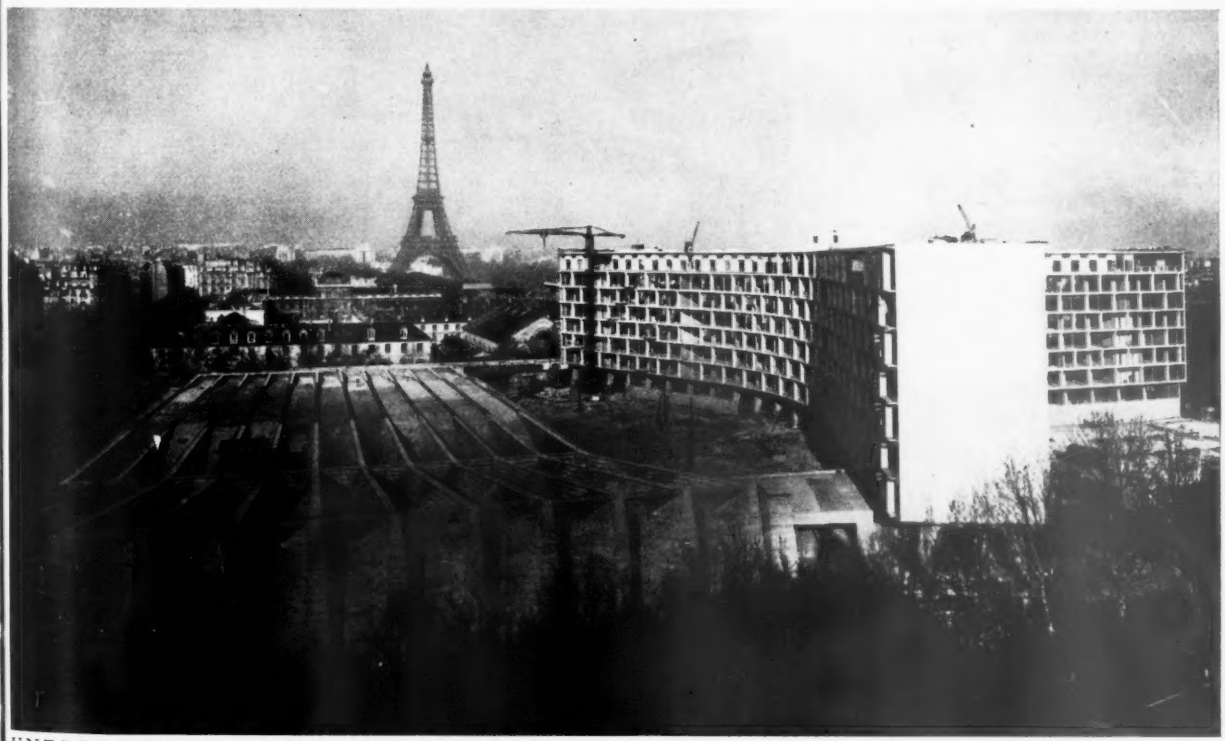
First of all, the Royal Institute of British Architects which so kindly lent us this beautiful room, and without which this exhibition would not have been possible. May it receive, in the person of Mr. Kenneth Cross, its President, the expression of our sincere gratitude.

But I want also to express our thanks to M. Calsat who has planned this remarkable exhibition and to M. Claudius Petit and M. Joseph Marrast, Vice Président de la Section Française de l'Union Internationale des Architectes et Président de l'Académie d'Architecture, who have consented to come to this opening.

My thanks also go to all those who have helped to arrange the displays, to the firms Dexion Limited, and Aluminium de France, which have allowed us to present these photographs and models so beautifully.

And now it is a great pleasure for me to declare open this exhibition.

Professor Sir Patrick Abercrombie: Your Excellencies, it gives me the very greatest



U.N.E.S.C.O. Building, Paris. Architects: Zehrfuss, Nervi and Breuer

pleasure in my capacity as Honorary President of the I.U.A. to thank you for opening this exhibition for us here at the R.I.B.A. As you know, the Union has its headquarters in Paris. We have a French permanent secretary in M. Pierre Vago, who I am glad to say has a house he has designed in Algeria on view at this exhibition, and we are delighted to see, as you have said, M. Claudius Petit, who had the great courage as a Minister to give Corbusier the job of designing the Marseilles block. That was a great courageous act.

Then what can be pleasanter to see than the smiling face of my dear friend, M. Marrast, who is always at his very best on those noble and wonderful evenings which those architects in Paris seem to be able to organise.

I was present on one when two enormous wreaths were hoisted while all the traffic of Paris was held up and a military band played superbly. Do we ever do such a thing for architecture or architects in this country? 'No', is the answer. That is why we are so honoured to have you present here to bring over from France this great appreciation of the art of architecture, which is practised in your country and in ours and throughout the world.

You mentioned one or two things, Your Excellency, which I would like to add to. First it gives me great pleasure to see the work of my dear Auguste Perret at Le Havre.

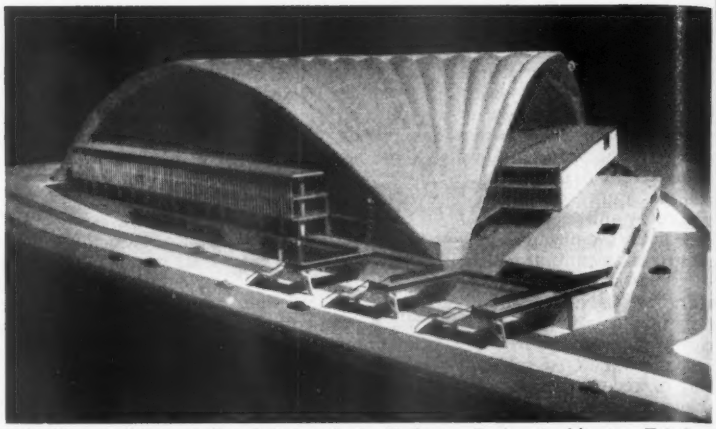
You will see two different systems of thought in the development of architecture in France, and it gives to me an enormous pleasure to see the sobriety and simplicity of that treatment in Le Havre, which was the work of Auguste Perret and his collaborators. Alas, he is with us no longer, but there are many young French architects who are carrying on that tradition.

There is a photograph here of a great power station with all those cooling towers, which has all the touch of a French layout, which we so rarely see in our industrial buildings in this country. We are always interested in controversies. We have our own controversy around St. Paul's in this country. Yours is UNESCO headquarters in Paris.

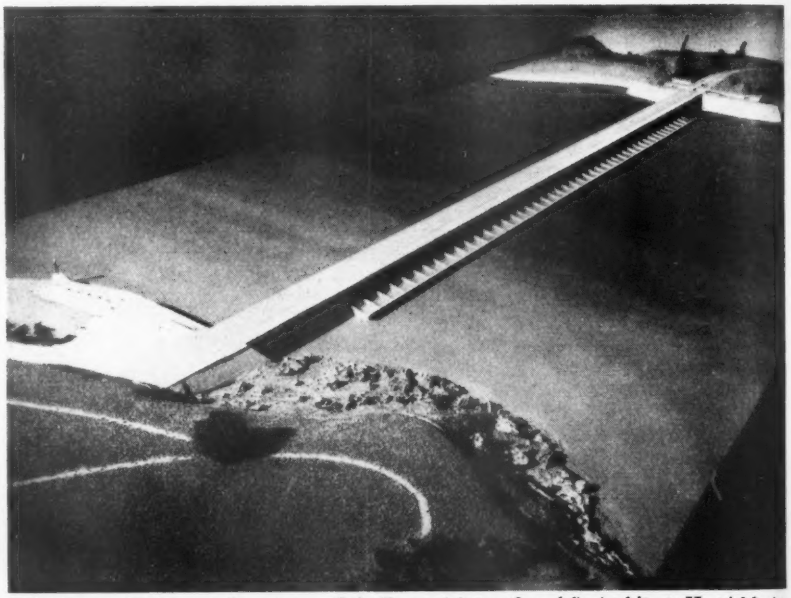
Some of the buildings which we are so interested in here before us are those great industrial ones. I am looking at a dam across the way.

We have the privilege of seeing here today these magnificent photographs of the work which is being carried on in France today. I would like to express my great thanks for allowing these things to come and for being present here to open the exhibition for us. My only word of regret is that our very good cultural friend at your embassy, M. Varin, is not here. It is the first time that I have been at a French gathering in this country at which he has not been present.

I am sure we all hope that he will make a speedy recovery, and we shall see him amongst us again soon.

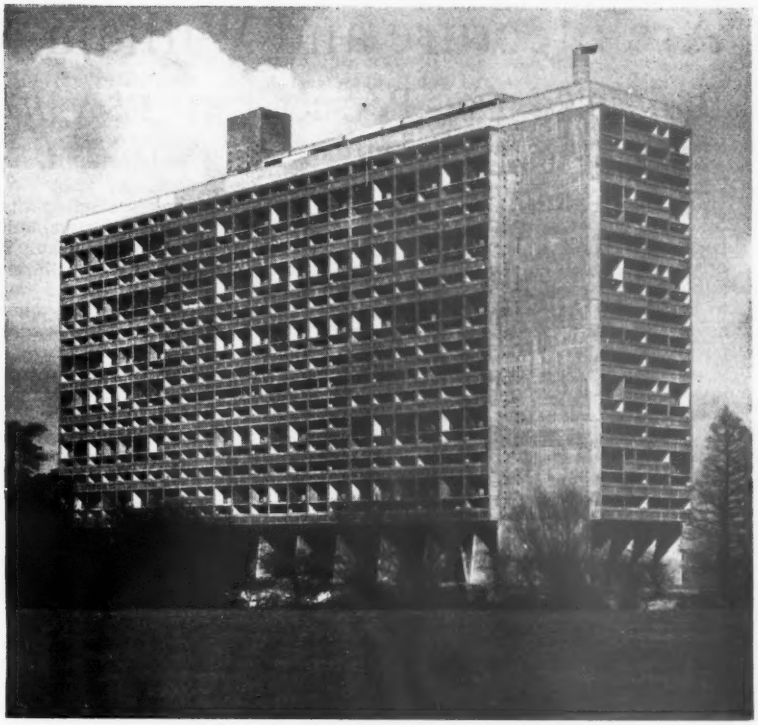


Exhibition building at Rond Point de la Defense, Paris. Architects: Zehrfuss, Camelot and De Mailly

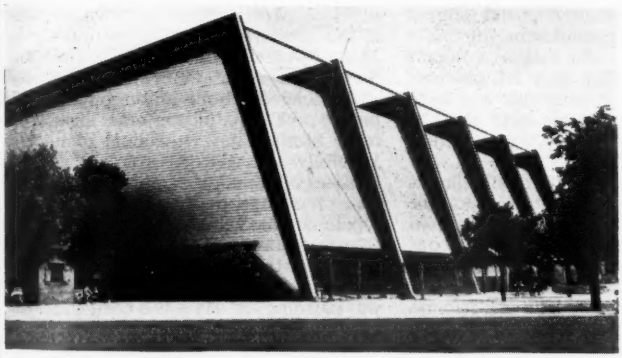


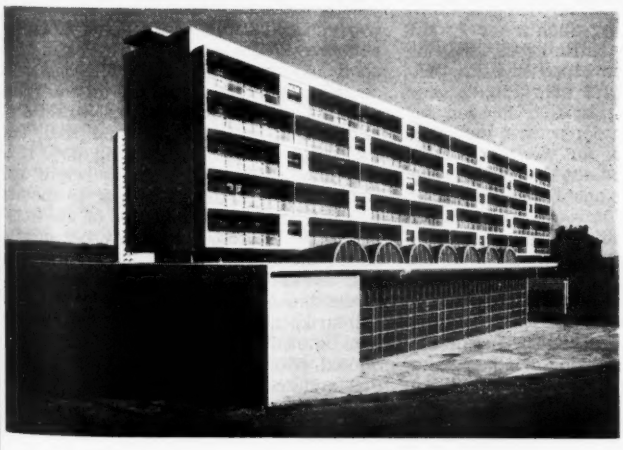
Tidal Power Station on the estuary of the Rance (photo of model). Architect: Henri Marty. Consultant: Louis Arretche

House at Poligny. Architect: Henri Calsat

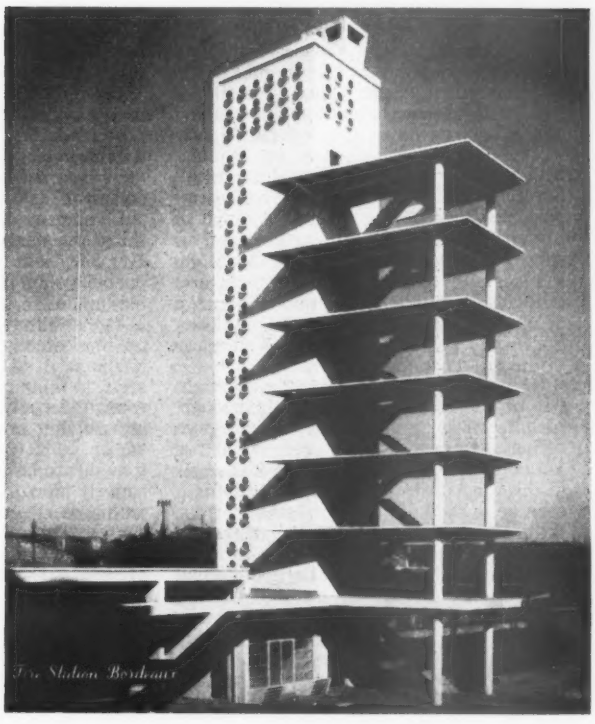


Block of 294 flats at Nantes-Rezé. Architect: Le Corbusier. Above, Nursery School on roof showing part of swimming-pool and maze. Right, general view of the 18-storey block which has 1,400 inhabitants





Left, top picture: Ice Rink at Boulogne-sur-Seine. Architect: Saint Galbre. Lower picture: Fire Station at Bordeaux. Architect: Claude Ferret. Below, the drying-tower with exercise platforms of the same fire station



Architecture and William Morris

By Dr. Nikolaus Pevsner, C.B.E., F.S.A. [*Hon. A.*]

Read at the R.I.B.A. on 19 February. The President, Mr. Kenneth M. B. Cross, in the Chair

YOU SHOULD HAVE COME here tonight to listen to Michael Ventris. My address is a poor substitute for his. It will be less original. It will also, I'm afraid, be less attractive, for Michael Ventris combined to a degree I have hardly ever found in anyone, scholarly originality with simplicity, directness and a most lovable, sometimes almost embarrassing modesty. It was this latter side of his which we chiefly knew as neighbours, and I must confess that the full impact of his discovery, the Linear-B script, was only brought home to us—a long time, it is true, before the papers started being full of it—by a visiting Swede who spoke of Michael with awe and admiration as of a model of venerable erudition. It would not make sense at first; so unpretentious, so unassuming was he with the likes of us. Only his friends can know how intensely fond one was of him. One could not express it or show it to him, and the regret for that will remain for ever added to one's deep feeling of loss.

Michael would never have given a lecture like mine tonight; for I cannot flatter myself that it is an original contribution. I have not discovered new facts, I have hardly, I think, hit on new ideas. All I have done is to re-read Morris, to run once again through accumulated notes and to tabulate, if you like, what Morris thought and said and wrote about architecture. My re-reading is closely connected with the William Morris Society which we founded last year, and which, thanks to the kindness of the President and Secretary of the R.I.B.A., has a share in this evening and in fact proposed this lecture. Rightly so, I think; for the aims of the William Morris Society are: 'To provide a forum for the exchange of ideas on his contemporary influence over the whole range of his artistic and political activities and to spread the knowledge of his work among a wider audience.' And his architectural thoughts, if my interpretation will prove acceptable, are indeed a test of the pulsing life that to this day runs through so many of the utterances of his mind.

So what you are going to hear tonight will be, as much as I can possibly manage, his utterances and not mine, a florilegium of his utterances, as we used to say at THE ARCHITECTURAL REVIEW. But there is a danger in this kind of florilegium and there might even be in the kind of association that our William Morris Society is, the danger of faking or at least fiddling history to make it fit the needs and aspirations of today. Even among the experts on 19th century art and architecture some have not escaped this danger. My book of twenty years ago was called *Pioneers of the Modern Movement* and later *Pioneers of Modern Design*. So it was frankly not a history of 1870 to 1914, but the singling out of certain trends of significance to the 20th century, at the expense of others equally significant for the complete picture of the style of the late 19th. Even this proved not without its dangers. But the real danger arises only if such singled-out features appear in a book under the tacitly or explicitly made assumption that they represent all that matters in the 19th century because they are all that matters to the 20th. I don't want to be an accomplice in establishing Morris as a nothing-but-pioneer, and one reason I had to want to have an opportunity of delivering this lecture, is to distinguish more than I could in my book between Morris the Victorian and Morris the pioneer.

This distinction is historically necessary, although Morris was emphatically one being, with plenty of contradictions and incompatibilities, but all forged into one impetuous whole, forceful, wilful, single-minded. 'I am a boor and the son of a boor', he communicated to a man at their first meeting.[1] A maid at the Burne-Joneses one day took him for a burglar, so slovenly, or unplaceable, was his dress[2]—dark blue suit, lighter blue shirt, no tie,[3] and a 'great capacity for producing and annexing dirt'.[4] His restlessness, the fact that he couldn't sit still even at meals, that he got into tempers which made him run his head against the wall, or bite his teeth into the edge of a table, these things are familiar from Mackail's *Life*.[5]

Less familiar perhaps but equally illuminating is the fact that with all this violence he remained yet a detached character, to a remarkable degree managing to keep out of emotional entanglements that might endanger his work. 'I must confess it . . . I am living my own life in spite of . . . anything grievous that may happen.'[6] 'I have ever been loth to think that there were no people going through life . . . free from binding entanglements. Such a one I want to be'.[7] Wilfred Scawen Blunt summed this up immediately after Morris's death. 'He is the most wonderful man I have ever known, unique in this, that he had no thought for any thing or person, including himself, but only for the work he had in hand. . . . He was too absorbed in his own thoughts to be either openly affectionate or actively kind. . . . I have seen him tender to his daughter Jenny and nice with her and with his wife, but . . . his life was not arranged in reference to them. To the rest of the world he seemed quite indifferent . . .'[8]

And this of a man who gave up painting because it was too unconnected with the promotion of the well-being of others, who gave up architecture because work in an office, as architecture mostly is, was too detached from life, and whose ever-guiding maxim was: 'What business have we with art at all, unless all can share it.'[9] I will not bore you with Morris's social-aesthetic principles. They are familiar: art must be for the people, not for the connoisseur; it must be by the people not by 'unassisted individual genius'.[10] This is how the conditions of art were in the Middle Ages, and unless such conditions can be restored to our age, there is no hope of a decent art or a decent life.

It is these principles which take us into architecture now, and you'll see at once how closely they are linked up with Morris's faith in architecture. His faith was indeed of the highest: 'the master-art' he calls it,[11] and 'one of the most important things which man can turn his hand to'.[12] His hand, please note, not his mind. It may be an accidental turn of the phrase, but it is very telling all the same. The crafts that make up architecture were closer to Morris's heart than the intellectual power of designing. So the aspect of architecture which interested him most is that, according to him 'every work of architecture is a work of co-operation'.[13] And so it is, of course, though not necessarily always in the sense in which Morris meant it. What he meant is the outcome of his veneration for the Middle Ages. 'The ancient buildings of the Middle Ages' were indeed 'the work of associated labour and thought of the people'.[14] Today, on the other hand—that is, in Morris's day—'the great architect' is 'carefully . . . guarded from the common troubles of common men'.[15] How true this was of an age in which an architect of repute designed churches, public buildings, country houses and villas but scarcely ever houses for the common man, I need hardly tell you. Yet this is not really what Morris was pleading for. He was a born craftsman, and so he turned his plea at once from architecture in the direction of craft: 'Noble as that art is by itself, and though it is specially the art of civilisation, it neither ever has existed nor ever can exist alive and progressive by itself, but must cherish and be cherished by all the crafts whereby men make the things which they intend shall be beautiful and shall last somewhat beyond the passing day. It is this union of the arts, mutually helpful and harmoniously subordinated one to another which I have learnt to think of as Architecture.'[16] We today may have our doubts about the word crafts here, irreplaceable as it was to Morris, but the wide view taken of the duties and privileges of the architect will strike a sympathetic chord. In a passage immediately preceding the one just quoted, Morris said more comprehensively that architecture 'embraces the consideration of the whole external surroundings of the life of man; we cannot escape from it

if we would . . . for it means the moulding and altering to human needs of the very face of the earth itself'.[17] That surely was bold in the days of Scott and Butterfield, or even Norman Shaw and Philip Webb, and its logical consequence was that to Morris 'unless you are resolved to have good and rational architecture, it is . . . useless your thinking about art at all'.[18]

But so far this has been architecture in the abstract. Now how do these principles link up with the actual building that surrounded Morris? You know all about his enthusiasm for Gothic architecture, and his dislike of Renaissance architecture, tastes fostered by his great admiration for Ruskin. He discovered the Gothic style for himself first at Oxford and then when travelling in France at the age of 21. 'O! the glories of the Churches we have seen!' he exclaimed in a letter to a friend,[19] and at the age of 22 he wrote in an article in the OXFORD AND CAMBRIDGE MAGAZINE[20]: 'I think those same churches of North France the grandest, the most beautiful, the kindest and most loving of all the buildings that the earth has ever borne.' He would have written almost the same at the age of 62. In the same youthful letter there is also a reference to a church 'Deo gratias not yet restored'.[21] So Morris's great preoccupation with protection instead of restoration started early too and was incidentally also stimulated by Ruskin.[22] In this matter again I need not go into detail. You know that Morris was instrumental in bringing about the Society for the Protection of Ancient Buildings, the Anti-Scrape, as they called it, and in formulating the principles for the treatment of old buildings which are to this day valid. They include two important new points: an intense appreciation of the surfaces of buildings and tolerance for the incongruity of their furnishings, as accumulated through the ages. 'The natural weathering of the surface of a building is beautiful, and its loss disastrous.'[23] In another place Morris adds to this aesthetic the historic interest in 'the sentiment attaching to the very face which the original builders gave their work'[24]—a fallacious argument because weather ruins an original face as thoroughly as the 19th-century builder's workmen. Now for furnishings: 'In my opinion there is no remedy . . . but for the public to make up its mind to put up with "comparatively recent" incongruities in old churches . . . and to be content with keeping them weather-tight.'[25] Hence Morris's hatred of Gilbert Scott whom he once called 'the (happily) dead dog'[26] and hence his defence of Wren's City Churches menaced with destruction,[27] although he obviously could not like them. He called St. Paul's, 'on the grounds of beauty', hardly acceptable 'as a substitute for even the latest and worst Gothic building', and accepted Wren churches only either as 'proper', respectable and showing 'the due amount of cultivation . . . of a decent unenthusiastic ecclesiasticism'[28] or, from the historian's point of view, as 'a destined link in the history of the ecclesiastical art of this country'. All the same, in some cases he was ready to acknowledge the 'architectural beauty' of English Renaissance work, e.g. in the staircase of Ashburnham House.[29] But these cases are rare, and his dislike was really constitutional, in the sense that it applied to all Italian Renaissance art as well. In a letter to Lady Burne-Jones from Verona he confessed in the same year in which he wrote to THE TIMES in favour of the City Churches: 'With the latter (i.e. post-Gothic) work of Southern Europe I am quite out of sympathy. In spite of its magnificent power and energy, I feel it as an enemy. . . . Even in these . . . wonderful towns I long rather for the heap of grey stones with a grey roof that we call a house north-away.'[30]

But all this is still only Morris's reactions to the old, even if extremely lively reactions. What now when it comes to building afresh and for his own age? The first principle is this: 'Today there is only one style of architecture on which it is possible to found a true living art . . . and that style is Gothic architecture.'[31] However, in practice things worked out much more complicatedly. For neither was Morris an advocate of the Gothic revival, as it was accepted by many estimable contemporaries of his, nor was he entirely an enemy to Georgian domestic architecture. So his actual position was very different from, e.g. Scott's who had advocated the Gothic style as the most suitable for 'domestic architecture, present and future', and denounced Baker Street and Gower Street as 'utterly intolerable'.[32] Morris, on the other hand, called J. R. Seddon's neo-Gothic St. Paul's Parish Church at Hammersmith 'an excrescence'[33] and Waterhouse's Assize Courts at Manchester 'a dreary pretentious heap'.[34] So it looks as if the pleading for Gothic architecture meant no more than that 'an architectural style' for our age must be 'the growth of our own times, but connected with all history'.[35] Nor was all history to Morris simply tantamount to Gothic forms. That results as clearly from a study of Morris's designs for textiles as from such sayings as 'I by nature turn to romance rather than classicalism'.[36] His friend Webb said the same about him: 'W. M., who used any "strain"[37] which came through his wide knowledge of many ways and manners.'[38] In fact and in spite of all these strains, i.e. these allusions to Persia, Turkey, Gothic tapestries, Jacobean embroidery in Morris's designs, Burne-Jones was right in saying: 'All his life he hated the copying of ancient work as unfair to the old and stupid for the present.'[39] And if you want to hear him personally on this topic, I only need remind you of that crushing remark on 'the trick of masquerading in other men's cast-off clothes'.[40]

So while, according to Morris, a style of the late 19th or 20th century ought to be founded on the Gothic it ought not to imitate it. So far this sounds perfectly consistent and convincing. Unfortunately, however, Morris continues the very passage from which I proceeded, the one about the founding of all living architecture on Gothic architecture by adding: 'As to the form of it'—that is, of living architecture 'in the future'—'I see nothing for it but that the form, as well as the spirit, must be Gothic'.[41] Here then is a conflict, and in order to understand how it could arise we must now look more closely at Morris's conception of the development of the Gothic Revival in the 19th century. In several pages of his lecture on *The Revival of Architecture* he describes how the early Gothic revivers built 'ridiculous travesties of Gothic buildings',[42] how their 'genuine study of mediaeval architecture' began, how 'it was slowly discovered that it was not, as was thought in the days of Walter Scott, a mere accidental jumble of picturesqueness consecrated by ruins . . . but a logical and organic style' and how 'those principles' discovered in the Gothic style 'belonged to the aesthetics of all art in all countries'.[43] The next step after that was to see—regretfully perhaps—that the 19th had too little in common with the finest Gothic, that of the early 14th century, to make it at all possible to link the one with the other. So architects, Morris says, turned first to the Perpendicular as a 'more workaday' style[44] and then even to the late 16th and the first half of the 17th centuries, because the style then valid 'drew what vigour and beauty it had from this impulse of the period that preceded it'.[45] After this 'semi-Gothic survival'[46] followed the change to classical architecture, and to Morris's views on this I have to turn again now.

But whereas I had so far only considered Wren and the Italians, I now want you to think in terms of workaday Georgian buildings in the streets of England. Here Morris's attitude is curiously ambiguous. That he did not like them is certain. But beyond that he wavered between abuse and tolerance. His remarks range from 'pedantic imitations of . . . the most revolting ugliness'[47] and 'the feeble twaddle of the dilettantism of the latter Georges' to the admission that this feeble twaddle still 'had a kind of life about it, dreary as that life was',[48] and to occasional much more surprising admissions. To start from Gower Street (which is a natural thing for me), Gilbert Scott, as I told you, had found it utterly intolerable. Morris says: 'One is beginning to think with regard of the days of Gower Street.'[49] Now what architecture of his own day could have made Morris say that? Two things, I suggest. The 'sweltering dog-hole' of the workman on which he felt naturally very strongly, 'surrounded with miles of similar dog-holes',[50] but also the wealthy house which he called 'simply blackguardly' and built for 'ignorant, purse-proud digesting-machines'.[51] In fact he made very little difference in aesthetic value between poor, medium and rich. He said: 'The murder of art that curses our streets from the sordidness of the surroundings of the lower classes, has its exact counterpart in the dullness and vulgarity of those of the middle classes, and the double-distilled dullness, and scarcely less vulgarity of those of the upper classes.'[52] So what made the Georgian house acceptable was its simplicity and solidity. He said they were 'stupid and unimaginative enough', but 'creditably built . . . and

without pretence'[53] and hence 'at the worst not aggressively ugly or base'.[54] He called them 'bible and port-wine houses',[55] and that surely means a modicum of praise for their 'commonsense and convenience', the sign of a moment 'when, though art was sick and all but dead, men had not quite given it up as a bad job'.[56]

Now in this same passage there is also a curious remark on the houses 'built about the reign of Queen Anne', which still 'stretch out a hand towards the Gothic times'. How can this be understood? Surely the style of Queen Anne's reign is the simplest, straightest, least ornamental of all. The one possible answer is that Morris did not really mean it. Queen Anne at the moment when the lecture was given in which this passage occurs—that is in 1878 or 1879—was a term used to denote the recent revival in domestic architecture led by Norman Shaw and with its gables, bay windows and short pilasters indebted more to the Dutch and English mid-17th century than to the early years of the eighteenth. How imprecise the use of the term Queen Anne was can be read in many places. For instance I came across, only a fortnight ago, a wonderful book called *Les Merveilles de l'Exposition de 1878*. In it there is an illustration of Norman Shaw's British Pavilion, half-timbered, with asymmetrically placed gables, the friezes of short blank arches so familiar in Elizabethan and Jacobean woodwork, and oriel windows on brackets; in short, pure early or mid-17th century, and the text says that it is 'construite dans un style tres charmant et surtout tres-aimé des anglais, le style du temps de la reine Anne'.[56a]

Let us take the anonymous *Ballad of Bedford Park*, Norman Shaw's revolutionary garden suburb of 1875–80, which is quoted in Sir Reginald Blomfield's biography of Shaw.[57] This is what it says:

'Here trees are green and bricks are red,
And clean the face of man.
We'll build our houses here, he said,
In style of good Queen Anne.'[58]

And 16 lines earlier on you hear this:

' 'Tis there a village I'll erect
With Norman Shaw's assistance,
Where men may lead a chaste correct
Aesthetical existence.'

Now the cottages of Bedford Park are again certainly not in the *style de la reine Anne* and in addition, you will notice that here the whole so-called Aesthetic Movement is taken in, and to this Morris himself as a designer and decorator no doubt belonged. The immediate source of the ballad is of course Gilbert and Sullivan's *Patience*. You all remember the lines:

'Be eloquent in praise
Of the very dull old days
Which have long since passed away,
And convince 'em if you can
That the reign of good Queen Anne
Was Culture's palmiest day.'

And you also remember that the piece ends:

'You will rank as an Apostle
In the High Aesthetic band,
If you walk down Piccadilly
With a poppy or a lily
In your medieval hand.'

That alluded of course to Oscar Wilde, but, once again, Wilde, Norman Shaw, Morris—it was all lumped into one about 1880 and called Queen Anne. Here for instance is what Colonel Edis, the architect, said in a lecture in 1880:[59]

'Then came the Gothic revival, and in furniture we exchanged the curule chair for the "narrow seat and knobby back", not more comfortable or pleasant to our persons than the ancient "sedilia"; nor can much be said for the carved cabinets, ponderous sideboards, and imitation mediaeval furniture, constructed of course "on unexceptionable authority after the true fashion of our ancestors". And now has set in a fashion, dedicated to her most sacred Majesty, Queen Anne, a fashion which has developed much of really good art character, and which, after all, properly applied, is really bringing us back to old English work. Amongst the more educated professors of the style, we find at present many pretty conceits, which are not worthy of the name of art; but we also find good construction and carefulness of design, which we may hail as forerunners of better times, and more artistic work. It is but fair to say that to Messrs. Street, R.A., Norman Shaw, R.A., Waterhouse, A.R.A., E. W. Godwin, W. Burges, P. Webb, and other architects, and to Messrs. Morris and Co., Messrs. Crace, Messrs. Gillow, Messrs. Jackson and Graham, Messrs. Jeffrey, and other well-known firms, much praise is due for their efforts in the cause of artistic design.'

Morris must have felt himself in an ambiguous position. Philip Webb who was the architect most after Morris's own heart and Morris's own architect had indeed already in Red House built for Morris in 1859 used real Queen Anne windows, slender with segmental heads and close white glazing bars and had placed them in his Gothic brick setting, and this could indeed be regarded as the proof of Morris's assertion that in the Queen Anne style—the real Queen Anne style—'there was yet left some feeling of the Gothic . . . joined to form such as sash windows, possible to be used in our times'.[60] This remark can refer only to Philip Webb his lifelong friend. Webb came from Street, the best type of the high-minded, but also open-minded, High Victorian Gothic Revivalist, and the man under whom Morris also had worked for a short time as an assistant. Webb's is a harder, rougher, more robust style than Shaw's. It has in his best work those 'massive, simple, direct qualities of the "Barbaric" saving element of breadth' which he praised in early buildings.[61] This Morris must have appreciated.

Yet the fact remains that he nowhere in his lectures and writings explicitly proclaimed Webb the great architect of his day. So it does look as if to Morris even Webb's actual buildings were not a solution and that the baffling remark about the Gothic forms of the future which I quoted some minutes ago remained his negative answer to the whole architecture of his day. The remark was in fact made three years before his death. The possibilities for a 20th century future which we see in Webb, in Shaw, in some of Shaw's followers, in Voysey's earliest houses he did not recognise. He could not extricate himself from the dilemma of Victorian historicism.

His uncomfortable feelings are most clearly seen in his attitude to Norman Shaw. I don't think he liked Shaw. Yet Shaw and Shaw's clients liked him. He furnished for instance, as you know, Shaw's Swan House. One can indeed say that the Art and Crafts Movement was spiritually the work of Morrisites though physically of Norman Shavians. Yet to promote 'pretty conceits' (to use Colonel Edis's term) was clearly not what Morris and Co. had been built up to do. What then was his personal reaction to the Shavian style? The most important statements are in the lecture of *c.*1879 called *Making the Best of It* and the lecture of 1888 on *The Revival of Architecture*. It is here that Morris in the words I quoted to you traced the development of the Gothic Revival from the imitation of forms to the recognition of principles and then led on to the 16th and 17th centuries and so to Queen Anne and Norman Shaw. He praises the 'ringleaders of the rebellion',[62] he calls their designs 'experimental', and holds 'that they are . . . born of thought and principle' as well as of 'great capacity of design',[63] and he admits that 'at first sight the Queen Anne development has seemed to conquer modern taste more or less'.[64] But at this point his doubts become noticeable—not only in so far as in another place he (rightly of course) calls these houses still 'the exceptions',[65] but also in the attributes he grants them and the terms he uses to describe them. Where he refers to Norman Shaw by name, he speaks of his 'elegantly fantastic Queen Anne houses in Chelsea'[66] and in another place of the 'quaint and pretty architecture' of Bedford Park.[67]

Now anyone familiar with Morris's terminology can only regard 'pretty, elegant, fantastic' as damning with faint praise,[68] and what Philip Webb says about Norman Shaw corroborates that view. Webb calls the neo-Queen Anne 'dilettante-picturesque' and 'exceedingly artificial'.[69] 'Artificial' is the most important word here. Shaw's is indeed a more sophisticated architecture than Webb's and that to Morris must at once have linked him up with the whole artificiality of his century. Moreover, Webb was his man also in so far as he never ran an organised, commercial office like Shaw;[70] that he designed every detail himself[71] and that he believed that 'the beginning of training for building and design must be on the works and in the shops'. That is of course the counterpart of Morris's belief in the craftsman and his dislike of the designer, or 'squinter on paper' as he called him.[72]

Morris would not be Morris without this

undying hatred of 19th, or shall I now say, 20th-century methods of production, the production of the design, then the production of the article, and finally the production of the building. This horror of the machine and horror of the big city anchor Morris in the Victorian age just as firmly as his ultimate faith in Gothic forms. I have indeed tried to show many years ago that a juster appreciation of what the machine might do for civilisation began only at about the time of Morris's death and gathered strength—with the aid of both reasonable and unreasonable arguments—in the first decades of our century.

But while disgust with the machine even to the extent of the 'nasty, brimstone, noisy, shrieking railway train',[73] and disgust with the big city and London in particular—'this beastly congregation of smoke-dried swindlers and their slaves'[74]—'a whole county covered over with hideous hovels',[75] 'masses of sordidness, filth, and squalor, embroidered with patches of pompous and vulgar hideousness'[76]—while these magnificent vituperations belong to Morris the Victorian,[77] there is plenty in the same lectures and letters which belongs squarely to the 20th century, and with these pioneering or prophetic utterances of Morris I want to end. Let me first simply give you a string of short quotations. They will incidentally surely show you how much scope there is in a William Morris Society. 'Until our streets are decent and orderly', it is no use to speak about the prospects of art.[78] So do away with 'the sluttish habit' of throwing away sandwich papers 'as if it had been snowing dirty papers'.[79] Improve 'the daily increasing hideousness of the posters',[80] see to it that 'we have clear sky above our heads'[81]—a compliment is paid here in passing to Saltaire and Sir Titus Salt's 'huge chimney . . . as guiltless of smoke as an ordinary domestic kitchen chimney'.[82] Then, and this turned out to be a particularly effective plea: 'What do you do with the trees on a site that is going to be built over? Do you try to save them? Do you understand what treasures they are in a town or a suburb? . . . In London and its suburbs we always begin by clearing a site till it is as bare as the pavement',[83] and not, as Morris well knew, because their disappearance is necessary for the builder to lay out his new estate, but 'because it will take him too much trouble to fit them into the planning of his houses'.[84] And then, as for the house itself, Morris pleads for the bare floor: 'It is a great comfort to see the actual floor'[85] with just a rug here and there, he pleads for natural oak showing in the woodwork of a room, just as it comes from the plane,[86] and for the dining table without a cloth and only with mats.[87] No wonder then that he also makes the typical Werkbund or D.I.A. statement that the kitchen as a rule is the more reasonably and pleasantly furnished room than the drawing-room or parlour.[88]

The philosophy on which this was based is—you can see that—all of a piece, and Morris was honest in saying that he would rather live 'in a tent in the Persian desert, or a turf hut on the Icelandic hillside' 'than in the England of his time'.[89] Yet here we are faced with a conflict, a conflict which goes through all his working and preaching. Clearly there is another side to this plea for extreme simplicity. There is for instance the passage where he speaks of the utilitarian, solid, unpretentious late Georgian town architecture as 'the fallow of the arts before the new seed could be sown'.[90] And there are other places where *tabula rasa* is taken far more seriously. They are in fact among the most frighteningly prophetic of his sayings: 'How often it consoles me to think of barbarism once more flooding the world, and real feelings and passions, however rudimentary, taking the place of our wretched hypocrisies.'[91] And 'Perhaps the gods are preparing troubles and horror for the world (or our small corner of it) again, that it may once again become beautiful and dramatic'.[92] And 'Maybe: man may, after some terrible cataclysm, learn to strive towards a healthy animalism, may grow from a tolerable animal into a savage, from a savage into a barbarian, and so on; and some thousands of years hence he may be beginning those arts which we have now lost'.[93]

That, as you see, is pure Spengler: the disappearance of a civilisation and its replacement by another, starting from scratch—the disappearance of our civilisation and its future replacement. But did Morris really mean that? He may, but he was much too active, too busy a person to be paralysed by such thoughts. And so there are other passages where he speaks of doing 'our best to the end of preparing for change, and so softening the shock of it; to leave as little as possible that must be destroyed to be destroyed suddenly and by violence'.[94] He called that 'reconstructive' as against destructive socialism. But while his lectures may indeed be accepted as serving at least that purpose, can the same be said of his work as a designer and decorator? There surely the conflict was much more acute, and consequently the work itself, socially speaking, is much more of the 19th than the 20th century. Morris's products were costly; they were only accessible to the few, the select, those who according to him don't matter. His products were neither by the people nor for the people, and the recognition of this fatal limitation in his own writings is very rare indeed. I can only think of one, that surprising late passage on the possibility of inexpensively produced books being yet fully beautiful, purely on the strength of their 'fitness for use'.[95]

But then, not the least of the thrills of reading William Morris is the surprises his writings give you. And so let me finish with a random sample from them—all bits connected with architecture and planning. On Oxford: 'the little plaster houses in front of Trinity College . . . are in their way as important as the more majestic buildings to which all the world makes pilgrimage'.[96] Then on Outrage—what we call Outrage with the new fashionable term: 'Most true it is that when any spot of earth's surface has been marred by the haste or carelessness of civilisation it is heavy work to seek a remedy'.[97] On the spec. builder: Don't 'lay the fault upon the builders, as some people seem inclined to do: they are our very humble servants, and will build what we ask for'.[98] So it becomes, as we all know, a matter of education, and there is Morris saying in 1880 that 'the 20th century may be called the Century of Education'.[99]

Is it not amazing? And what do you think of my last quotations, two of the most profound? Apropos of gardens in towns he suggests not to apply too much ingenuity and complexity to the planned details, but to leave 'Nature to do the desired complexity'.[100] Isn't that the motto of all the best recent housing, i.e. Roehampton Estate? And of the church or civic hall in a town he says that they 'to a certain extent make up to town-dwellers for their loss of field, and river, and mountain'.[101] I think that's wonderful.

Well—that must be enough. It should be enough to bear out the truth of that remarkable remark of—of all people—Toulouse Lautrec: 'Je crois qu'il n'y a qu'à regarder William Morris, pour avoir une réponse à toutes vos questions.'[102]

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VOTE OF THANKS AND DISCUSSION

Sir Frederic Osborn, Chairman of the Town and Country Planning Association, moving a vote of thanks to Dr. Pevsner, said:

It is always a mental and moral stimulus to be reminded of the tremendous personality and influence of William Morris. Dr. Pevsner has done that for us, and has sought out and assembled Morris's views on architecture with so much of his customary learning and judgment that a vote of thanks almost moves itself.

I have really no qualifications for discussing this difficult question of aesthetic philosophy. I am not an art critic. I am not even, I say with great temerity and hesitation, a critic of art critics. But I am very interested, if not quite convinced, by Dr. Pevsner's diagnosis of what he calls a conflict in Morris's mind. There cannot be any doubt that he was a real fan for Gothic as against Renaissance—in his own basic feeling, I think, and not simply as a follower of Ruskin.

But speaking as a layman and outsider, I should say that the Battle of the Styles is, so to speak, surely a tactical issue in Morris's aesthetics. On the much greater strategic issue he was very clear and single-minded. His dominant passion—and this comes out in almost every lecture he ever gave—was Art for Everybody. He wanted everybody to share not only in enjoying but in producing art. As G. K. Chesterton said, 'Morris was a man who wanted good wall-papers, not as a man wants a coin of the Emperor Constantine; . . . he wanted good wall-papers as a man wants beer . . . and he possessed and developed a power of moral violence on pure matters of taste which startled the flabby world of connoisseurship and opened a new era.'

Being convinced that everybody had a latent desire—and a right—to enjoy and create Art, he thought it was the material conditions of their lives that deprived the workers of the desire and the right. And he thought the bad conditions of life were all due to what he called the 'Capitalist' or profit-seeking system. So he became less passionate as a Socialist or Communist—this comes out again and again and again in his lectures—than as a propagandist of Art for All. The extraordinary thing about Morris is that although he really believed in the necessity, for the betterment of Society, of some social governmental action, he wasn't the sort of chap who sat under a tree Waiting for Godot. He really did get on with the job himself. Not only did he preach but he also experimented.

I wonder if Dr. Pevsner quite does justice—this is really a wonderful paper and I greatly admire it—to Morris's effectiveness in this double campaign. He was a mighty yet subtle influence in the Socialist-Labour movement, which has—whatever our party views may be—in fact transformed modern Society; this in spite of the fact that no political Socialist can strictly be termed a Morrisite any more than a member of an established or nonconformist church can strictly be called a Christian. But the fact is that these people are very different from what they would have been if it had not been for the influence of the things they look up to. The modern political Socialist would be a different creature, the movement would have been different, if it had not come under Morris's influence.

Now, I don't see any failure at all nor even an inconsistency or paradox in the fact that at first Morris's practical products were only bought by the rich. He had to make things and to sell them where he could and he did hope that the start he had given would cause the spread of these better standards to a much wider region of Society. It seems to me that the great paradox of his life-work is that it has been a powerful influence in transforming the products of capitalist industry, of which he had no hope whatever. Again and again he would have thought nothing good could ever come out of the capitalist or profit-seeking system. Both the quality and the design of capitalist-produced goods have improved out of recognition since the 1880's. It just about covers my lifetime, and I have seen it: knives, forks, textiles, all sorts of things. I could spend a whole evening giving a list of the things that have by some process actually got better during this period.

Take the factories of today—notably the factories in the garden cities and new towns—they are all capitalist but they are not very far from the ideal demanded by Morris: light, clean, surrounded by gardens, largely using machinery (and he did look to this) to lessen labour. They have all sorts of clubs and societies in them (a thing he was very keen on). Many of these societies foster all sorts of craft work from paintings, photographs and wire sculpture to needlework, flower-gardening and do-it-yourself activities of all kinds. And the schools of today, many of them, would please Morris by their architecture and surroundings, and not only by their architecture and surroundings but by their introduction to creative craftsmanship in which at least in many cases they start an interest.

I do not think he would have liked modern mass production very much, and I feel pretty sure he would not have liked 'Music while you work.'

We have to admit that there is a certain ambiguity in Morris's definition of architecture. Sometimes he seems to mean just building design. More often he extends the meaning to include everything a man looks at in life—from the landscape to the curtains and the mustard pot. I don't see that this matters, however, so long as architects are modest and don't claim to be dress-designers, town-planners and arbiters of the whole human environment. If in the wider sense Morris wanted every man to be an artist, he also wanted every man to be an architect. What he really meant was that everybody should enjoy the whole scene and everybody should make his own contribution to its beauty.

There are two more points. I can't see that Morris was particularly 'Victorian' in hating the squalor and compression of the cities. Most of the powerful Victorians, like Macaulay, the spokesman of this point of view, were obsessed by the idea of industrial progress and paid little attention to its appalling corollaries in the living and working conditions of the masses. Morris was always on the side of the masses. He was so much more defiant and articulate than they were about the hideousness of their surroundings. He had a very clear idea of the sort of combination of artificial and natural beauty to aim at in houses and towns. I cannot give you a lot of quotations but you will remember that he visualised the buildings of the future as 'ornaments to nature' and he saw people as living in openly planned towns penetrated by gardens and trees. You can see this in *News from Nowhere*, but there are a lot of other quotations that could be given.

Lastly, I think Dr. Pevsner is perfectly right in seeing Morris as a pioneer of many things we are just beginning to get in the modern world—the Green Belt, for instance, and commons and open spaces, and the general safeguarding of the countryside from ugliness. Dr. Pevsner referred particularly to the protection of ancient buildings. I was very amused to see only a week ago in the Journal of the American Institute of Planners that Philadelphia planners and architects have just raised the fiery cross in defence of what they call the oldest skyscraper in the United States of America which was built the year after Karl Marx's *Communist Manifesto* and several years before Haussmann's reconstruction of Paris. They were also defending with equal vigour the second oldest cast iron building in the United States. I do not know what William Morris or Ruskin would have thought of that, but Morris was no devotee of what is sometimes wrongly called 'urbanity,' or of crowding townsmen together to save a bit of land. And if I may just share my own interest, my own King Charles's head, more than almost anything Morris wanted everybody to have beautiful houses in green surroundings, or what he called natural surroundings (I do not think they are natural surroundings, but you know what he meant), vegetative surroundings in which things grow, where they could be touched in their souls by what he called 'the great drama of the seasons.' But he was not afraid of taking a bit of country land for men's homes. As he said, 'For any space you have lost, and for any destruction of natural growth, you would in the times of art have been compensated by orderly beauty, by visible signs of the ingenuity of man and his delight both in the works of nature and the works of his own hands.'

Mr. A. Llewellyn Smith, M.B.E., M.A. [*F*], seconding the vote of thanks, said: Dr. Pevsner has once more placed us very greatly in his debt. He said with becoming modesty that his lecture included no new facts and few if any original ideas. And it is true that the sources on which he relied are sources which are open to all of us. Nevertheless, his lecture seemed to me

be a work of real scholarship, illuminated with flashes of keen insight, for which we must all be very grateful.

I was greatly interested in his suggestion that when Morris spoke about Queen Anne what he meant was not the architecture of the turn of the 17th and 18th centuries but the style of Norman Shaw. Almost he convinced me, but Dr. Pevsner himself quoted Morris as speaking of the houses built about the reign of Queen Anne and I have always been rather impressed with Morris's scholarship. I do not think he would have made such a gross confusion as that. I am sure that he did from time to time use the loose phraseology of the period.

I was also very glad that Dr. Pevsner emphasised Morris's concern for the protection of old buildings, even at the cost of some incongruity which, of course, in those days, was anathema. And I think Morris would have been delighted to know, as I have no doubt Dr. Pevsner knows already, that among the restorers of Rochester Cathedral in the last century were Smirke, Savage and Twopeny.

Yet if architecture was to Morris 'the master-art', it was, I suppose, the branch of art on which his own work made least direct impact. He worked, it is true, as a young man in Street's office; but he very soon found that he was not attracted to a career in architecture as it was then practised; and in later years he was content to lean in architectural matters very largely on his friend Philip Webb. And yet which of us can doubt that had Morris never lived the subsequent course of architectural thought would have been widely different and very much the poorer? Morris's personality was so tremendous and his influence so powerful and wholesome that none of his contemporaries could remain unaffected by him. One is reminded of the schoolboy experiment in which one scatters iron filings on a sheet of paper and then shakes the paper gently over a powerful magnet. Not all the filings are attracted to the poles of the magnet; some may even be repelled. But all of them must needs take up their position and direction according to forces induced by the magnet. In the same way, Morris was—shall we say?—an electric pole in which the forces and currents emanating, I suppose, from Ruskin were concentrated and through which they were communicated to his friends and followers—above all, I suppose, to Lethaby, whose centenary we are celebrating this year. In this way they exerted an immeasurable influence on architectural thought and practice thereafter.

Now, sixty years and more after his death, very few are left who remember Morris as a person; but his ideas—or at least a large part of them—have become part of our common heritage. And it may be that they are all the more potent in that they have, as it were, become part of our ordinary beliefs and are no longer specifically associated with his name.

But what a man he must have been; and how great is our loss that we never knew him. Twenty years ago, Sir Sydney Cockerell, writing to an old friend, said: 'Forty years yesterday since Morris died! My thoughts go back to those sad days, and to the friends (so few surviving) connected with them.' Is there, I wonder, anyone now living today whose death will be remembered as a landmark forty years hence?

Of the manner of man Morris was, and of what he was really driving at, we get some inkling from an anecdote told me by an old lady who knew him well and also from a passage in one of Lethaby's letters. I will give you both, because both are authentic and neither, to my knowledge, has yet been published.

The story is of a girl who called on Morris in his workshop—doubtless it was the narrator herself, though she did not say so—when he was just finishing the final drawing for one of his great wall-papers. He was, in fact, putting in those little round flecks of lighter colour with which he used to enliven some of the darker passages of the background. She said to him: 'Surely, Mr. Morris, you do not put in the dots yourself?' Morris's answer was: 'Do you think, Madam, that after the grind of working out a design like this, I'd let anyone else have the fun of putting in the dots?'

My quotation is from a letter from Lethaby which has just come to light amongst my papers but he must have written it to me, I suppose, more than thirty years ago. He writes:

'Of Morris it is doubtful if we quiet people can tell. I knew him as a timid youngster might, without much understanding at the time; but I have no doubt that he *saw* something *tremendous*. . . .'

And then in a footnote, almost as an afterthought:

'What Morris *saw* was labour. More and more people write about it as politics, and wages, and holidays away from it; but Morris *saw* the world of labour, and I fancy nobody else has done that—except perhaps Tolstoy.'

I would venture to suggest that he might also have mentioned Ruskin.

I have the greatest pleasure in seconding this vote of thanks.

Mr. John Brandon-Jones [*A*]: I should like to add one or two footnotes on a subject I think is a bit misunderstood—the relationship between Morris and Philip Webb and Norman Shaw.

Dr. Pevsner said that Morris never actually stated his faith that Webb was the great architect he is. But I don't think he could really be expected to have done that, because they worked so closely together that to say Webb was the great architect of the day would almost have been self-praise, and I do not think he would have found that that was necessary or seemly. Webb designed houses for which Morris did the insides, and Morris's firm designed interiors for which Webb and later Lethaby and W. A. S. Benson did the architectural work. They were hand in hand all the time, meeting constantly and working together. So I do not think it could be expected that you would find Morris advertising Webb as an architect, although I am sure he did introduce him as an architect to various people he knew who were looking for architects.

The second point I should like to make is the relationship of the Morris and Webb connection to Norman Shaw. Blomfield in his life of Shaw gives a very one-sided view of the relationship between Shaw and Webb and Morris. Blomfield suggests that there might have been some difference of opinion between Shaw and Webb dating from the time when they were together in Street's office. I think this is complete nonsense. Blomfield bases it on the fact that he never heard, so he says, Shaw speak about Webb. I think that was probably because Shaw knew Blomfield well enough to know it was not worth while talking to him about Webb. He knew Blomfield was temperamentally incapable of really appreciating Webb's work, but Shaw certainly discussed Webb with Lethaby. I have seen a letter from Sidney Barnsley in which he describes a visit to Shaw and says Shaw was talking to him about the past and his lifelong friendship with Webb. He produced some photographs which he had treasured ever since Webb gave them to him some fifty years before.

From the other side, I have come across a letter recently from Webb to Lethaby written just after Shaw's death, and I quote from that:

'I had thought that the old and trustworthy friend Norman Shaw would have held on as long as myself. But no! He has done good and serious work and could have done more if he had lived longer.'

There was no reason why he should have written that if he had not really meant it. I am quite sure there was a great deal of mutual respect between the two. There was a great difference between them, but it was of course political and religious.

I think that as far as architecture and art were concerned they probably saw very much eye to eye, and it is obvious from these two letters that they were in fact friends, although they did not have any intimate correspondence which has since been discovered or published. They probably did not need much. They met fairly frequently; as young men working in the office they were in contact and each knew very well what the other was doing. They worked not together but in friendly rivalry.

The vote of thanks was carried by acclamation.

Dr. Pevsner: There is very little I have to reply to except to express my gratitude to the three speakers. Sir Frederic Osborn must have saved more trees in his life than anybody present or anybody who could possibly be present here. Mr. Brandon-Jones has managed to do in three minutes what I have not done in one hour; namely, to contribute new material.

Drawing Office Technique—II*

Symposium on the relation and form of Drawings, Specifications and Bills of Quantities and other information necessary for the execution of a building project

Held on 12 February, at the R.I.B.A., Mr. Peter F. Shepheard [*A*], in the Chair

Mr. G. GRENFELL BAINES [*A*]

Information required from the Client by the Architect

(Read by Mr. Thomas Hargreaves [*A*])†

Introduction. A recent questionnaire issued by the Cost Research Panel of the R.I.C.S. asks, among other things: 'Do variations arise from subsequent changes of mind of architect or builder owner?' This question may, to a great extent, be answered by another: 'Do architect and building owner always succeed in arriving at a full statement of needs, and then is this full statement fully analysed?'

Even when full statement and analysis are reached are they always clearly expressed? Generally speaking, competition conditions present as full a statement of needs as could be desired; they are compiled by experienced architects, are often admirably presented and yet, to our surprise, questions often run into hundreds. True, most of them are unnecessary and betray lack of experience, but many can help to amplify the original brief, and the less industrious of us are always grateful to those who ask them.

This paper will deal with the two main aspects of determining needs:

(1) Content of statement;
(2) Methods of arriving at full statement and analysis.

If a design is to provide the complete answer to all the needs it is intended to fulfil, then the author has to appreciate *completely* that the building structure must be a faithful reflection of the human structure which calls to being its existence.

Thus an intense preoccupation with all the *people* who are to inhabit the building and use it as part of their life, an only slightly less preoccupation with those who use it as a passing part, and a lively concern for those who have to accept building as part of their general setting—all these are vital.

Unless these structures of people and what they have to do in, and with, the building—'Folk', 'Work', 'Flow', are seen clearly then the next expression, the design, cannot be expected to remedy the defect for, as in photography, each reproduction away from the original subject is a little more blurred.

It is unlikely there will be any doubt in your minds as to where responsibility lies for formulating requirements. It is a joint responsibility of architect and client. There are varying degrees of sharing responsibility at different stages of study, but if he wants the project to run smoothly to a successful conclusion the architect owes it to himself at least to inspire the client with a sense of this joint responsibility, its creative possibilities, and rewards.

Close on this and, without busybodying or allowing unachievable perfection to overshadow the good, the architect must provide the main motive power in the drive to discover the best and latest ways of doing the work in which the client requires the building to be a partner. So the architect has to be both engine and brake; being trained to take the synoptic view he should be capable of achieving this paradox. Very often the architect imagines he has not the time to travel about studying buildings designed for purposes similar to those of his commission, and consoles himself by the thought that all clients are different and his is probably more different. He could not make a greater mistake.

All clients are one in appreciating that an architect should be sufficiently interested in the client's business to spend time studying how other people work it, and only the most short-sighted of clients would be unreceptive to new ideas which might lead to improvements in his way of working.

To recapitulate. The formulation of requirements is the joint responsibility of client and architect, with the architect responsible for the initiation, momentum, and control of research into the functions of the building. In this study a knowledge of the inhabitants and their jobs is a fundamental aim.

Out of this knowledge will emerge the schedule of accommodation—an account of spaces, their extent and place in relation to each other and the whole. In the round this schedule has also to match the client's *capacity* to provide for his needs, and today, for various reasons, this question of capacity can be more important than the functional analysis. Note: *Can be* more important rather than *is*. There is a certain elasticity in a client's capacity to carry the economic stresses of the project, though it must be remembered this elasticity has its limits which today are narrowing as the importance of building is diminished by all the other preoccupations of life in a modern society.

The instalments on the 'tele' which reduce a tenant's capacity to pay hire for a better house are matched by the changing structure of industry which diverts materials and men to make the 'tele', helping to create a scarcity of resources in other industries including building, with the inevitable consequences of a scarcity situation. One thing leads to another.

We are not here to go into that, but no exploration of requirements can hope to succeed in reaching the goal safely unless the question of capacity is fully understood and its limits appreciated with realism. It may not always be wise to press this matter to too early a conclusion. A client would either have to be unnatural or very fully informed and realistic about building costs —which *is* unnatural—if he wasn't found to expect more for his money than could reasonably be provided. For this ignorance of building costs we in the industry are mainly responsible, and until we cope with the difficulties of providing a cost information service, we must continue to put up with the resulting difficulties of a client's ignorance and the fears and suspicions which flourish in it.

Clients have to be gently prestressed to take the heavier economic strains of doing the job properly. At the same time, the prestressing performance must be controlled by a searching process of distinguishing between real needs and mere desires; in other words, the most thorough probing into functions which brings us round again to where we were a short time ago, except that now the ideal schedule of accommodation is an optimum in which the space requirements measure up to the budget.

Quality of finish can of course act like a governor in this process, but in the absence of electronic brains to solve our design problems we must continue to remain at the wheel in full control. Experience in our office, which now amounts to five successive jobs where the lowest tender falls in with both the client's space requirements and budget, convinces us that a very large part of the answer to a hitherto recurring and desperate problem lies in cost planning and the early use of a sketch cost analysis in conjunction with the schedule of requirements. No doubt later speakers will deal with this.

In the process of helping the client to play his part in arriving at requirements, and to help ourselves in remembering, we have devised a number of forms to record purposes, areas and relationships of spaces. Equipment and furnishing: incom-

* A sequel to the symposium on Drawing Office Practice held in February 1956.

† Mr. Grenfell Baines was unable to be present on account of his broken leg. His partner, Mr. Hargreaves, read his paper.

ing and outgoing services. In this work we have found Ministry of Education BULLETINS a great help. Of all clients the Ministry of Education takes high rank. That British schools are among the finest in the world is an unimpeachable testimonial to the truism—'it takes a good client as much as a good architect to produce a good job'.

Our use of these forms follows this process. They are first issued to the client by the designer at a personal interview when their purpose is explained. Then the client is given time to draft his replies in pencil. Some clients are very definite and are found to have gone to considerable trouble to discover their requirements. Most, however, appreciate a fairly early return visit by the designer to help in completing the forms. Depending on the type of form to be completed, the designer should bring to these interviews all the research findings, catalogues, and technical information that is relevant.

We have recently evolved a 'Standard Requirement Sheet' which is used by the designer at the early interviews with the client.

Perhaps the most important part of this is the price guide section. This enables the client's capacity to be tested at an early stage without the test necessarily leading to destruction—that comes later. We have already dwelt on this point, though would remember in passing that first, as a good cost plan breaks down the jobs and makes it easier for the architect to control, it also helps the client to see where the money is going and to get a more balanced view of expenditure from which, quite frequently, he is prepared to spring to a little more for a better job.

Space and Place. Naturally as experience is gathered this guide will be kept up to date and expanded.

Even when the basic schedule of accommodation is complete to the point where sketch plans could be prepared, further detailed work covering arrangements of equipment and furniture, services, degrees of comfort, danger and so on, might be carried out with advantage. Here the technique is interviews, attended on the client's part by top management and functional level management, on the architect's by partner and job designer, followed by draft reports of the inquiry with designer's conclusions for editing by clients at all levels of management involved. This is followed by an agreed amended statement finally embodied in the brief.

Apart from the client's requirements the architect must include his own standards of performance where correlation between physical properties as thermal and sound insulation, durability, fire resistance, and all in relation to costs, first and running, are, in the architects' office at any rate, to be regarded as an integral part of the brief.

Many clients appreciate these inclusions as long as their presentation is limited to the 'end figures' of physical and economic performance. In this respect some manufacturers of structures are beginning to correlate information in a most helpful manner. No doubt the Building Centre is keeping a watchful eye on this important aspect of giving useful information as a way of selling building products.

It is an open question whether the architect resorts to visual aids in assisting his client to a statement of requirements, or in assisting himself for that matter. Personally, we prefer not to encourage clients to clear their minds by doing their own sketch plans, even though doodling is supposed to be a healthy psychological process. We would rather ourselves reach a design in the mind before the eye, but that is personal, and as we are dealing with persons a flexible attitude to methods is obviously needed. One thing we have learned and this is to be philosophic about the fate of the first sketch plans. Theoretically, a thorough study of needs, leading to a complete statement of the problem, should automatically lead to an acceptable sketch plan. In practice, we have come to see our first efforts nobly playing the same part as the wicker mats which George Stephenson threw down on Chat Moss. Though labouring unseen, they nevertheless pave the way to that ultimate document which is the very embodiment of the client's real needs, as imaginatively and artistically interpreted by the architect strictly within the client's economic capacity. Needless to say, when this ideal is achieved, we get our client to sign it or else write a letter confirming his unqualified approval.

T. B. HARPER ELLIS, A.R.C.A. [*A*]

Information given by the Architect to the Quantity Surveyor.

To show you the Form of Information we pass to the quantity surveyor, I think I can best do this by going through all the stages of the work from the 'space and place' list given by Mr. Hargreaves, through the work we do, in collaboration with the quantity surveyor and the various consultants.

The following is *our* method of approaching a complex job.

It is assumed that the architect who has obtained the briefing will personally carry out the whole project.

We like to use the 'space and place' preliminary questionnaire giving the numbers of persons occupying the rooms, but we do not like using a questionnaire at the beginning of a briefing which sets out one long list for each room, asking for information about fittings, finishes and services. This assumes a preconceived idea of what each room will contain; it makes the client confused by attention to detail, at a time when he should only be concerned with general principles.

We like simple lists of accommodation, together with an analysis diagram consisting of, say, circles, showing the relationship between the various departments.

The client must also give the reason why these relationships are necessary.

We strenuously discourage his attempts to do physical planning himself.

With this information, and with the knowledge of the site [the architect has surveyed the site and obtained adequate information about the adjoining land or buildings] he can then go back to the client with *his* analysis, which may be classified into like upon like, circulation routes, horizontal and vertical, etc.

The following information will also be required:

(*a*) Is the building to be completed in a single phase?
(*b*) Is the building to be completed in several phases over a number of years?
(*c*) Is the building to have unknown extensions?
(*d*) Is the building to be completed in a single phase, but to be flexible within so that changes may be made?

The requirements of (*a*) to (*d*), will obviously affect the conception of the building. For example, a school which is to be completed in one phase is very different from one to be completed in several different phases.

With this information, we are now ready to meet the quantity surveyor, the structural engineer and the mechanical engineer.

The project is discussed with them in general principles. The architect says whether a definite sum of money has been allowed for the work or whether the client would require to know the cost of the proposed scheme.

Information about proposed starting dates would be given and as much information as has been obtained by the architect up to that point about the scope of the work, should be passed on.

$\frac{1}{16}$ in. Scale Drawings. A $\frac{1}{16}$ in. scale sketch plan can now be prepared, for preliminary discussion with the structural engineer. A copy of this drawing is taken by the engineer, and there is an interchange of ideas, so that by the end of a week or so he can put forward his suggestions. After a further meeting, general ideas on structure are exchanged.

The sketch design is then re-drawn to $\frac{1}{16}$ in. scale showing the proposed structural arrangement and a copy sent to the engineer. He then prepares his preliminary structural drawings and at the same time the $\frac{1}{16}$ in. scale sketch designs are drawn out showing in line only the rooms, corridors and sanitary accommodation, etc., also the sections are drawn to this scale. We also prepare the block plan, to the scale of, say, $\frac{1}{500}$ in. These are then taken to the client for his comments.

The quantity surveyor and mechanical consultant are given copies of these drawings too.

When approval of the sketch design is obtained from the client it is often desirable at this stage to take the drawings to the local authorities for discussion of the bye-laws and town planning requirements.

$\frac{1}{8}$ in. Scale Drawings. Each floor is now drawn out to $\frac{1}{8}$ *in. scale*, but these again are only sketch designs. The drawings are again taken to the client. On a large job many prints may be required so that appro-

priate heads of departments may discuss their sections with the architect.

The general principles of the layouts of the rooms and the necessary services are discussed and notes taken. Where warranted the mechanical consultants should also be present.

The layouts of the rooms are then shown with the fittings on these $\frac{1}{8}$ in. scale drawings, and in doing so it may be necessary to make adjustments. A copy is sent to the mechanical consultant for him to study.

$\frac{1}{4}$ in. Scale Drawings. After approval of these drawings by the client each room is drawn out to $\frac{1}{4}$ in. scale with elevations of the four walls, and at the side of this drawing is a key diagram showing the relationship of this room to the other rooms on the floor, and a schedule is also given so that information may be obtained under these headings: *Fittings, builder's work, finishes, plumbing, electrical and other services.*

The prints of these drawings are then taken to the client for further discussion. Everything about the sequence of all fittings must be known, whether they will be standardised, and need to be interchangeable—in fact, the architect must understand *all* the requirements for each room.

Clients generally have preconceived ideas —often affected by the environment of other working conditions, which they know have not been good, and tend to think about the correction of faults, rather than rethinking the whole problem from first principles.

Many attempts may have to be made in preparing these layouts before a satisfactory answer is obtained. The client should not be rushed—the architect should spend as much time as possible with him, for the success of the completed building depends on the thoroughness with which these details are thrashed out.

Copies of these final drawings, with completed schedules, are then given to the mechanical consultant, who should be given plenty of time to study them. A meeting is then arranged, and the routes of his services are discussed, and the position of the boiler-house and the type of fuel to be used, etc. He should send, as soon as possible, preliminary information about the size of the boiler-house and tank capacities.

$\frac{1}{8}$ in. Scale Drawings. Meanwhile preliminary $\frac{1}{8}$ in. scale sections and elevations are drawn out, and copies sent to the structural and mechanical engineers.

The work is now sufficiently advanced to arrange a programme with the quantity surveyor and the consultants, for the dates of completion of their work, so that the necessary information can be received by the quantity surveyor, in its correct sequence and at the right time.

The architect now has the major part of the information he requires, which enables him to select materials, taking into account the requirements for fire protection and thermal and sound insulation, so that further details can now be prepared.

$\frac{1}{2}$ in. Scale Drawings. The preliminary $\frac{1}{2}$ in. sections, plans and elevations are drawn out, and copies sent to the structural and mechanical engineers. Sufficient information is placed on these drawings for the mechanical consultant to work out his heat losses. These drawings also show the plumbing and rain-water pipes, details of expansion joints through roofs, floors and walls.

Back to $\frac{1}{8}$ in. Scale Drawings.—As soon as the advanced foundation plan is received from the structural engineer, the drainage schemes are completed for foul and rainwater. The foul water drain sizes are assessed from the Code of Practice ratings. The drainage runs are arranged, so that there will be no unnecessary deepening of foundations, caused by drains being too near the building. The drains are also shown on the $\frac{1}{500}$ in. scale block plan with the connections to the sewers.

The drawings should now be received from the mechanical consultant showing his layout on, say, $\frac{1}{4}$ in. scale, of the boiler-house, details of the cold water storage tanks, the major and secondary ducts. Layouts will also be received showing hot and cold water supply, and gas, and in the case of a hot water heating system, all pipe routes and sizes.

$\frac{1}{8}$ in. Scale Drawings. The major and secondary ducts are immediately drawn on the architect's $\frac{1}{8}$ in. scale drawings, with the position of all access covers, and a copy sent to the structural engineer.

$\frac{1}{2}$ in. Scale Drawings. The final drawings of beam, column and floor profiles will now be received from the structural engineer which will enable the architect to complete the $\frac{1}{2}$ in. scale drawings and make adjustments to his $\frac{1}{8}$ in. scale drawings.

The expansion joints will have been settled so that the position of rainwater outlets can be finally positioned.

(In framed structures we prefer twin columns at expansion joints and upstanding curbs across the roof.)

Full-size Details. Also at this time full details of the doors and windows are being prepared.

$\frac{1}{2}$ in. Scale Drawings. The doors and windows are then all drawn out to $\frac{1}{2}$ in. scale, elevations, plans and sections. The damp proof courses, vertical and horizontal, are shown on these drawings, with all the fixings dimensioned and changes in floor finishes shown.

Particular importance is attached to the details around doors and windows. Such detailing exposes any difficulties which may arise. If thoroughly done the detailing of the structure is virtually completed.

(We do not like type-written schedules.)

Electricity. The mechanical consultants will, about this time, have supplied the electrical drawings and will have discussed the position of the distribution panel for the various circuits, and the routes of telephone and call systems. An effort is made to provide for the minimum amount of cutting and attendance to be done on the site for all services. We show all holes, sleeves and chases on the drawings.

$\frac{1}{2}$ in. Scale Drawings. The $\frac{1}{2}$ in. scale final drawings are now completed and the specification notes are added to these drawings for the use of the quantity surveyor and for the specialist supplying estimates.

References are made to B.S. Codes of Practice wherever applicable.

$\frac{1}{8}$ in. Scale Drawings. All the information has now been received from the consultants to complete the $\frac{1}{8}$ in. scale working drawings.

On the $\frac{1}{8}$ in. scale sections the line of the existing ground level is shown.

The $\frac{1}{8}$ in. scale drawings give datum levels, finished levels, internally and externally, floor finishes, symbols for finishes to walls (plastered or fairfaced, etc.), door numbers, window numbers, symbols for fittings and for all plumbing and sanitary fittings.

$\frac{1}{8}$ in. scale, $\frac{1}{2}$ in. drawings, and full-size details for P.C. items are sent out for estimates with their respective specifications.

Copies of the $\frac{1}{2}$ in. scale drawings are sent to the structural engineer so that any fixing battens or chases, which are part of the reinforced concrete work, can be shown on his drawings.

All the drawings are completed so that the tenders for the builder's work and mechanical services come in at the same time.

Drawings to Quantity Surveyor

1. Survey of existing site.
2. $\frac{1}{500}$-in. block plan showing all contours. Finished levels internally and externally. Nearest bench mark—position of water mains, etc.
3. All $\frac{1}{8}$ in. scale plans sections, elevations and specification notes.
4. $\frac{1}{2}$ in. scale details.
5. Full-size details.
6. Window drawing to $\frac{1}{2}$ in. scale.
7. Door and door frame drawings with ironmongery schedule.
8. $\frac{1}{2}$ in. fittings drawing with F.S. details and specification notes.
9. Type designs—manholes, traps, gullies, for foul and rain-water.
10. Structural engineer's drawings and specification.
11. Mechanical engineer's drawings with specifications, builder's work and schedules.

Mr. KENNETH CAMPBELL [*A*]

Information given by the Architect to the Builder

MR. CHAIRMAN, LADIES AND GENTLEMEN. It seems to me that the title of my particular paper is slightly ambiguous. It can really be divided into three different forms. First, what most architects actually provide for the builder; second, what all architects ought to provide for the builder, and, lastly, what the builder himself thinks that archi-

tects ought to provide for the builder. The last two don't always coincide. Now as far as this last one, what the builder expects, is concerned, Mr. Tompkins will be dealing with that, and, if he will forgive me for stealing his thunder, he has told me himself very modestly, that 'all the builder requires is everything at once'. But I think we can leave those really rarefied levels and get down to actual procedure.

Now as to what most architects usually provide. This can be again divided into three forms of each stage. There is first of all the lunatic fringe which provides an outline specification, a schedule bill (since there hasn't been time to produce a bill of quantities) and rather sketchy $\frac{1}{8}$ in. scale drawings. Now quite a lot of work is done on this basis and I am told that it is really very remunerative. But I believe it is only a fringe and therefore I don't make any apology to anybody here for making reference to this particular type. There is another fringe which I would call the angel fringe, and practically I feel we have the archangel of archangels with us this evening in Mr. Ellis. I think what he told us was a magnificent object-lesson; I only wish it were generally true.

I now come down to the rest of us, what we do and what we try to do. Now there is an enormous variety of practice as you very well know, and, by and large, it is partly conditioned by the size of the job and partly conditioned by the time available. The general pattern is something like this. The builder is presented at the beginning of the job with a specification and a bill of quantities, which since they have both been under control of the quantity surveyor generally agree with each other, $\frac{1}{8}$ in. scale working drawings and $\frac{1}{2}$ in. details which by and large at that point also largely agree with each other. After a short period the builder receives more $\frac{1}{2}$ in. details, the full-sizes of joinery for which he has already sent a very urgent letter, revisions to the first $\frac{1}{8}$ in. scales and the P.C. order for bricks. The third stage which usually follows on quite quickly consists of consequential revisions to the first $\frac{1}{2}$ in. details which have become necessary because of the revisions to the $\frac{1}{8}$ in. scales, schedules of doors and windows, more full-size details and the P.C. for heating because the builder has written in to point out that boilers are very long in delivery; and then so on throughout the job until the dead heat at the completion of the job when the final details arrive as the builder finishes the building. That would be, I think, not an unfair description of what many architects provide.

(That is really the title of my speech and I could sit down at this point but I am going to disappoint you by staying on my feet.) Now some architects do this sort of thing because they always have done this sort of thing, and their predecessors before them have done this sort of thing, and other architects who mean well and who would like to do better, do it mostly because they can't help themselves. Once the sketch plan is produced in the way already described to you and has been approved, the client, as you know, thinks that you can begin next month. You yourself tell him that you can begin in six months, and you actually begin a year later. Now that puts a strain on the whole time schedule, which too often happens, probably because the architect is trying to keep the client sweet at that part of the job, and doesn't want to appal him with the real time it takes, which I think is an error on the part of architects, but which, of course, we are prone to. The result of this tight time schedule and the misunderstandings arising from it is that we do get the kind of production of drawings I referred to, and in addition to that, of course, there are all the difficulties which occur to an architect which he can't possibly foresee. One lease of a corner of the site does not fall in when you think it is going to, or something else has gone wrong. There are changes in the client's plans or the district surveyor suddenly takes an intense dislike to the appearance of a beam. All these things cause trouble and there is not a great deal that one can do about it. There are cases where a client must have a building at an impossibly short time and the whole of the operations which we have heard tonight must be short-circuited in one way or another and the information has to go to the builder in all sorts of *ad hoc* ways. This does occur but I do not intend to deal with that myself now because I have not the time.

Now supposing everything to be satisfactory: the client's brief complete and final, the architect has been given adequate time and has in fact got enough time to produce everything which the builder ought to have or which he feels that the builder ought to have. Now in what form, what kind of information should the builder be given? I have given a list in a disconnected form of the material which should go to him. You probably all know this although there are many younger people here tonight who may not be absolutely clear, so the others must forgive me if I go through it again. There is the specification, there is the bill of quantities, the $\frac{1}{8}$ in. scale working drawing, the $\frac{1}{2}$ in. detail, some $1\frac{1}{2}$ in. details, quarter full-size details, schedules (doors, windows, ironmongery, sanitary fittings), P.C. orders, specification, layout, drains, heating services, electric layout, plumbing and the rest, and site works and the general block plan. Now if the builder gets the whole works at once at the date of commencement of the contract, he is probably astounded and thankful but it would represent a reasonable (and I think it does actually occur) state of affairs. But consider —and this is where I come to my own personal feelings about this—consider even then if we can't improve on that. It seems to me that in that list of material handed to the builder there is an enormous amount of duplication. For one thing you have only got to look at the state of a foreman's desk half-way through a job and to ask him to try to find a drawing amongst it and you will realise what exactly has been landed upon him. Take the question of duplication. The specification, for instance, tells in set terms that he had to place an R.S.J. on to templates or pad stones in a certain place. The bill of quantities then tells him what kind of R.S.J. in general terms; in another place tells him to place it in position, and in another place again tells him to obtain two pad stones which are again described in general terms, and those pad stones are again to be placed in position. Then, finally, the $\frac{1}{8}$ in. scale drawing shows him that an R.S.J. is wanted in this position and the $\frac{1}{2}$ in. detail also shows that it is wanted in this position, and one of the pad stones is dotted on behind the plaster. Then, as you know, it is 3 in. out of place at the end of all that. In addition—and this is a point I feel quite strongly about, where I think to some extent I take issue with my predecessor—there is not only duplication but there is a very considerable amount of mystification. It seems to me—and I am always a bit suspicious of how things seem to me, because at my advanced age I think one finds that one sees difficulties where they don't exist--but it does seem to me that the conscientious draughtsman attempts to crowd more and more on to the $\frac{1}{8}$ in. scale drawing. He does really seem to try to make the $\frac{1}{8}$ in. scale drawing a substitute for the specification and to some extent a substitute for all the drawings which will come after. As you know, a really 'good' set of $\frac{1}{8}$ in. scales have the window and door sizes shown on, all the dimensions, the position of access ducts and access panels, structure and beams, floor and wall finishes, electric light points and sockets, sometimes even switches, in fact the lot. As a result, of course, the foreman takes his sink outlet along the dotted line intended to represent the partition over.

Having made this criticism I must now make some suggestions. I shall not be allowed to get away without it. First of all I am a very strong advocate of the combined specification and bill. I think that if you get a good specification-bill, and there are certain requirements for a good specification-bill, you can cut out the first source of duplication, and all duplication means a possibility of error. But a good spec.-bill requires hard work. It means first of all that the architect must do a draft specification; it does not let him out of this job. The major clauses of this are incorporated—or I think they should be incorporated—by the quantity surveyor into the preliminaries for each trade. Then there must be an absolutely complete index so that you can find things in it (which would make it different from all other bills that were ever produced). Here I think is a case for waste in printing of some paper. I think that bills should be one-sided, the bills themselves should be on the right-hand folio, and on the blank left-hand folio should be the index. Bound up with the specification-bill should be complete schedules, typewritten, complete schedules of doors, windows, sanitary fittings, room finishes, colours and anything else you can think of—fittings and so forth. It seems to me then that the con-

tractor has a very fair picture of the jobs he has to do all in one document.

Now to take the $\frac{1}{8}$ in. scale plans. They, in my opinion, should be drawings of reference. I think that they should show the extent of the building; that is obviously necessary. They should relate the building to site boundaries. They should number and letter all rooms, clearly distinguishing between the different floors. They should number and letter all doors and window openings. They should show on the position of the sanitary fittings. This does not mean drawing on the double roll of the bath. It means just an outline to represent the fitting. They should show on the door swings which can't be shown anywhere else, and they should contain references to following details. I do not think there is a great deal more should go on the $\frac{1}{8}$ in. scale plan. Certainly not grano finish here, fair face brickwork there. The dimensions on the $\frac{1}{8}$ in. scales in my opinion should be kept to a necessary minimum.

In addition to the $\frac{1}{8}$ in. scales I myself have particularly strong feelings for the $\frac{1}{4}$ in. scale setting-out plan. It is a thing which used to be done many years ago in my first office, and I never found anything better for getting over all the troubles and to get the building right at the start. The $\frac{1}{4}$ in. scale setting-out plan simply shows the disposition and dimensions of the whole of the structure. It shows the holes for the services and the dimensions and not much else.

As far as leaving holes is concerned, it is my private contention that most builders would prefer a building to be built absolutely solid and then to hack the building out of the solid! It would be very satisfactory with the use of modern power tools, and you would at least be sure that the thing is finally right. As it is you have a hole left for a service *here* and you see a man hacking out a wretched great hole for the beastly pipe *there*, because something has gone wrong.

If I may be permitted a digression when I talk about dimensions and the structure, particularly brickwork (and we still do a fairish amount of brick building), I do get annoyed with the enthusiastic chap who dimensions brickwork to $\frac{1}{16}$ in., or even on some occasions to $\frac{1}{32}$ in. It seems to me that all materials should be dimensioned on the relative scale which fits their physical form. Steel can be dimensioned to $\frac{1}{1000}$ in. if you like; concrete, fair or rough, $\frac{1}{16}$ in., perhaps $\frac{1}{32}$ in.; timber to $\frac{1}{16}$ in., but in any case I do not like to dimension timber. I think you should simply say 'out of . . . ' otherwise you can give the builder and yourself awful trouble.

Another thing, where you have a run of piers, I like to see an over-all dimension and the running dimensions complete except for one pier, so that you let the builder or the unfortunate bricklayer take up that odd $\frac{1}{4}$ or $\frac{1}{2}$ in. which he has lost on the way round the building in that one pier. Provided you have the overall dimension and the running dimensions you are all right.

Now I would like to return to this $\frac{1}{4}$ in. basic drawing. I would like to see gold-backed negatives taken off (this is a magnificent modern invention which was not available in my day) and the same drawing used for plumbing layout and the same thing done again for heating services and the same thing done again for electrical services. So that each trade has a clear setting out of what it has got to do unencumbered by anything else.

Now of course it is extremely important when the architect is doing this that he traces the one over the other so that he does not get the things muddled up on the job. We have all seen so often one trade desperately trying to put its pipe line where another trade has already been and put its own. But that is a matter which can be cleared quite easily, provided the draughtsman is careful at the drawing stage.

Beyond this $\frac{1}{4}$ in. scale basic drawing the other scales used depend on the type and size of building. Of course there will be $\frac{1}{2}$ in. details which I think should be used very sparingly. If the job has been well detailed before and well scheduled I think there is not a great need for an enormous amount of $\frac{1}{2}$ in. detailing. There should be, I think, 1 in. scale details (this is a useful scale), and I mean details—just the thing you want to explain and no more—and the minimum of full-size drawing. Then the other important thing—and I must make a reference to it—is the importance of having set forms for the V.O.s, and a set programme of timing for V.O.s The V.O. should go out immediately the variation is ordered and a variation drawing should go with it. The V.O. must be priced at the office and the priced V.O. form go on to the file. So that you never have this business where you have a rapid check back to see whether you can afford to go to Messrs. Gibbons instead of Messrs. somebody else, and miss out half a dozen V.O.s which put you in the red about £500. They should all be there, they should all be on the job file, they should all be on a set form and not on the back of an envelope.

Now the question of time: should the builder be given everything at once? I am not quite sure that he should from an architect's point of view. I will tell you why. I think it is probably a bit irrational, probably very irrational, but my own feeling is that to some extent an architect grows with his building, and that if you try to settle everything before it starts you may lose something. One's feeling for a building develops right to the end. I know few architects and no builders would agree with me.

If you *don't* provide everything at the start it is essential that you agree the sequence of information with the builder right at the beginning. This sequence will differ with different builders and different jobs and has little to do with the sequence of operations on the job. Never think that because an operation comes right at the end of a job that the information can be correspondingly delayed. Joinery is an example. Moreover, the builder may by ordering early get materials at a better price, or he may know that some are in short supply. So I repeat, if all the information is not ready at the beginning don't decide yourself the order it should be given in—discuss and agree it with the builder.

Another thing, decide and place P.C. orders early; it is appalling how much time can be taken up in obtaining, checking and correcting sub-contractor's drawings.

I'm running overtime and have left out all the fascinating technical details—size of drawings, ink or pencil, lettering or handwriting, brown line or t.t.s. I must just remind you that on a long contract brown line prints left lying about in the foreman's office can nearly fade away.

Mr. CYRIL SWEETT, F.R.I.C.S.

Information required from the Architect by the Quantity Surveyor

An anonymous writer in the ARCHITECTURAL MAGAZINE in 1834 wrote: 'Do we not find it frequently the case that gentlemen have such an antipathy to the name of a Surveyor that if the builder were to mention to his Employer that he was about to engage a Surveyor to measure the work executed, he would immediately give offence: Consequently the builder is obliged to introduce the Surveyor into the building by stealth.'

We have, I am sure, outgrown that invidious reputation. As a profession we are now able and expected to advise on prices, on the financial aspect of different materials and different types of construction, taking account of contractor's methods, and the financial side of a building contract. To quote the Simon Report, we should be able to describe in words and by measurement every service to be performed to construct a building in accordance with the drawings and specification.

We consider it important that we should be invited to assist in preliminary cost planning with the architect and other consultants, and in spite of what you may from time to time read or hear, we have a progressive approach to new ideas, tempered with the realisation that we constitute only one part of a great industry, the various parties to which have in the past between them built up well-understood customs and traditions, which, if complete disorganisation is to be avoided, can only be changed gradually by agreement with all parties; and *that* after full consideration of the implications of the proposed changes.

The leader of the team must, of course, be the architect, but to be a leader demands, in addition to the ability to plan and design, the ability to organise and control. Some of us who have in the past lectured to architectural students have often—not perhaps entirely without justification—been disappointed at the apparent lack of interest about costing, management, building contracts, etc.

What the quantity surveyor wants from the architect can be considered in three

stages: pre-contract, contract, and post-contract—although in this paper I propose to concentrate mainly on requirements up to the letting of a contract.

The type of information must obviously be conditioned by the time allowed by the client to his architect for the placing of the contract. This will dictate the form of contract to be used.

It is, I think, generally agreed that the most satisfactory form of contract is the one which requires most time for preparation. This is the one based on firm bills of quantities upon which tenders should be invited from a selected list of suitable contractors of equal standing, and I propose to confine my remarks to this form of contract, although some of the principles apply equally to the other forms.

The work of the quantity surveyor and the job as a whole will benefit from a meeting between the architect, the consultants and the quantity surveyor at the earliest possible date. On important projects it is also helpful to consult with contractors, who can contribute a great deal to preliminary discussions with their intimate knowledge of site organisation, modern plant, etc.

It is at this stage that preliminary consideration can, with advantage, be given to the financial effect on total cost of alternate types of structure, cladding, finishings and equipment, and a budget can then be worked out which is satisfactory to the client, and which produces an overall figure within which the architect considers he can produce a satisfactory solution.

At this stage a great deal of experience must be brought to bear on every aspect of design, involving not only the consideration and evaluation of many alternatives, but also the relationship of each to the rest of the project.

From these early discussions the final sketch plans should emerge, and when they are completed they should be sent immediately to the consultants for comment, and to the quantity surveyor in order that a detailed approximate estimate can be prepared. This latter should give a more accurate estimate of each element in the design, and any further alternative prices requested by the architect. This more detailed estimate should then again be considered jointly in relation to the overall budget, each alternative material being considered from both an aesthetic and cost point of view, with due regard to the physical qualities of each, and also with special reference to maintenance costs. The detail of the revised estimate when finally agreed, and related to the original budget, or to any revised budget acceptable to the client, provides a costing framework and economic discipline within which the working drawings can be prepared, with a reasonable assurance that the tenders will not differ widely from the budget.

Clearly in the detailing of the scheme, variations will have to be made. These should be discussed with the quantity surveyor as they occur as, by adjustment elsewhere, it may be possible to keep within the budget, or, if this proves impossible, to obtain the authority of the client to any additional expenditure which may be necessary.

Some of you will, I am sure, have realised the disastrous results on the design of any project of receiving a tender much in excess of the estimate. This is the price the architect usually has to pay for preparing working drawings without regard to cost, keeping his fingers crossed, and ignoring the advice and warnings of his consultants: and believe me this does happen all too often.

Acceptance of the economic framework I have referred to is, I know, a difficult decision to make as economics and good architecture quite often do not go together; but equally the client must also be considered and there is usually a limit of expenditure beyond which he cannot go.

It is probably at this stage that the quantity surveyor will want to know from the architect what type of drawings he intends to prepare for the job; whether he will prepare $\frac{1}{8}$ in. scale drawings with $\frac{1}{2}$ in. and full-size details, or whether he will prepare $\frac{1}{4}$ in. or $\frac{1}{2}$ in. scale drawings with fewer full-size details.

During this discussion the architect must inform the surveyor if he has particular requirements so far as the bill of quantities is concerned: whether he is likely in his design to incorporate a degree of standardisation in structural or other elements which he would like reflected in the bill of quantities. The architect may feel he would like an annotated bill, which involves the combination of specification notes in the bill of quantities, or whether he has in mind what is called an elemental bill.

If the architect expresses an interest in elemental bills, the quantity surveyor will want to know which of the various forms of elemental bill at present in vogue the architect has in mind. The quantity surveyor will no doubt ask the architect his reasons for requiring an elemental bill, and may suggest possible alternate methods of giving the same information.

He will want to know whether the architect is preparing elemental drawings to go with the elemental bills, and he will no doubt draw the architect's attention during this discussion on the primary object of the bill, which is to present the information to the estimator in the clearest possible way, so that he may be able to make a proper estimate of the cost, pointing out that whilst an elemental bill may possibly offer some advantage to a contractor during the carrying out of a contract, it has not yet been established that it is of any assistance to him at the estimating stage.

The point I made earlier about standardisation by the architect of structural and other elements should be reflected in the bills of quantities; otherwise the economies which should result from the standardisation may not be realised.

Provided this problem is discussed on both sides with an open mind, it should be possible to reach agreement satisfying all requirements, without deviating too seriously from accepted practice.

There are also certain aspects of procedure in the architect's office which contribute substantially to greater accuracy in drawings. Consequently in the bills of quantities it is for instance essential that an accurate site survey be prepared at an early date, and that on major projects trial holes should be dug. Survey drawings should be carefully checked before they are used as this will avoid later amendment and variation in the event of any inaccuracies. Also before the preparation of the working drawings proceeds too far, consultations should be held with all the consultants and with selected sub-contractors in order that such things as heating, electrical and other services can be worked out in relation to plans and details. Alterations in these requirements at a later date can have disastrous results.

The quantity surveyor should advise the architect that a set of plans, elevations and sections should be issued to contractors tendering, and he will want to know whether this will be done. It is believed that if this became common practice lower tenders might be obtained, and some simplification of the standard method of measurement could be achieved.

I naturally assume that you are all aware of the procedure followed in the preparation of a bill of quantities, and you will realise that this procedure is very relevant to the order in which the architect supplies the necessary information to his quantity surveyor. I should like to give you an example of procedure which constitutes good practice in the supply of information to the quantity surveyor for the preparation of the bills. Deviations from good practice are, of course, from time to time inevitable.

Prior to the arrival of the drawings, and as soon as possible after the preparation of the sketch plans, the quantity surveyor should agree all priorities with the architect as to the order in which he would like to receive drawings and other information to conform with the organisation he proposes for the job. This can be presented in the form of a progress chart (to include consultants' and specialists' data) listing the information to be provided by each, and the dates for sending to the quantity surveyor. The following is an example of a brief list of suggested priorities:

Stage A

Structure, structural floors and roof above ground floor. This information is required from the outset since the form of structure affects every trade covered by the bills.

External cladding and finishings.
External doors and windows.
Internal partitions.
Internal finishings.
Internal doors.
Borrowed lights, etc.

Stage B

Staircases.
Fuel and rubbish chutes.
Fireplaces.
Railings and balustrades.

Stage C

Fittings and fixtures.
Services, including builder's work.
Plumbing and gas installations.
Heating and hot water services.
Electrical installations, lifts, etc.

Stage D

Foundations and substructures.

Stage E

Site works and external services, including drainage.

This order conforms fairly closely to the order in which drawings would normally be prepared in an architect's office, and if the priorities suggested are studied closely it will be realised that the objective by the quantity surveyor of completing the measurements of individual trades so that they may be transferred to the bill as soon as possible will be achieved where this procedure is adopted.

It should not be necessary to emphasise the importance of the quantity surveyor receiving prior notice of the arrival of drawings in his office, so that he may programme the work and arrange for the necessary staff to be available.

Responsibility for obtaining quotations from nominated sub-contractors or suppliers in good time can be assured, if so desired, by agreement between the architect and the quantity surveyor. Those involving the preparation of measured bills are normally best handled by the quantity surveyor. It is obviously essential, in all cases, that inquiries should be sent out in such a form as will ensure sub-contractors' tenders being related to the conditions of the main contract.

Having told you what we should like and how we should like it, I should now like to make a few observations about the drawings and other information necessary for the preparation of the bills. Obviously, of course, the more complete and final they are, the more accurate will be the bills of quantities, and probably lower the price. As contractors have a way of assessing not only the personality of the architect and the various consultants concerned, but also the probable state of their drawings at the tender stage, the result of this assessment will probably have a direct bearing on the price quoted.

It is, however, not always possible to finish all the detailed drawings before the bills of quantities are completed. When this is impossible, it is all the more necessary for the architect to retain a record of everything he passes to the quantity surveyor.

Again, where details are supplied, as sometimes happens, as dimensioned freehand sketches, a copy should be passed on to the draughtsman responsible, for incorporation in the finished drawings.

Details of doors, windows, and of floor, wall and ceiling finishings can best be provided by means of schedules, which can later form part of the specification. Some architects and quantity surveyors use standard forms for this purpose. A copy of the agreed schedules should, of course, be made available to the draughtsman responsible for the drawings.

During the course of the preparation of the bill, the quantity surveyor will inevitably have to ask a number of questions, and all these should be recorded on query sheets, with space left on the right-hand side for the architect's reply: the replies should be confirmed to him in every case. Copies of drawings from which the bills of quantities are prepared should be retained by the architect for contract purposes. This avoids difficulties in the administration of the contract, which arise when contract drawings do not conform with those the quantity surveyor has worked from.

All drawings should obviously be dimensioned. Undimensioned drawings rubber stamped 'preliminary or rough out not to be scaled' are of little use to the quantity surveyor, and drawings with large areas marked 'further details to follow' do not exactly contribute to the rapid production of satisfactory bills.

Drawings should also bear the name of the job to which they refer, and the architect's own name. This avoids the possibility of details for one job being confused with those of another.

Lastly, do not expect the quantity surveyor to work miracles. Remember, he occupies an invidious position at the end of the queue. Though he will always do his best to see the job through, if a period of two months is allowed for the production of drawings to the quantity surveyor, he expects them to arrive in a predetermined sequence during that period, and not all of them in a bunch during the course of the last two weeks.

On those rare occasions where a specification is provided by the architect with the drawings, the quantity surveyor should confirm any variations to the architect which have been made with his authority.

Let us now assume that the bills have been prepared, tenders have been invited, and the bill has probably been priced up by the quantity surveyor as a check on his approximate estimate. If all the recommendations I have made have been followed, a satisfactory tender should be obtained, and the architect with the building owner will be in a position to select a contractor and sign a contract with him.

Now for a few words about procedure during the carrying out of the contract, which are of importance to the quantity surveyor.

However carefully the job has been preplanned, some variations during the carrying out of the work are inevitable. The extent to which variations arise will vary according to the extent to which the job has been preplanned and detailed before the bills of quantities were prepared.

A formal variation order should be issued by the architect in respect of every item which has been varied, whether this be the result of the clerk of works' instructions, or of verbal instructions given by the architect. References, where appropriate, should be made to the drawings; there is nothing more frustrating for the contractor, the quantity surveyor, and all those concerned, than to have to wade through a mass of detailed drawings in order to ferret out variations between drawings used in the preparation of bills, and those issued to the contractor.

If this procedure is followed, the quantity surveyor's task in dealing with certificate valuations, budget forecasts, variations, and later with the final account will be enormously simplified; and if the sub-contractors can be bullied by the architects into submitting their final accounts far more promptly than is usually the case, there should be no reason why everything should not be cleared up within a reasonably short time after the completion of the contract.

Mr. W. TOMPKINS (MESSRS. RUSH AND TOMPKINS, BUILDERS)

Information required by the Builder for the efficient and economic execution of a Building Project

I see that I have been given 15 minutes to convey to you what information a builder requires from the architect in order to carry out a building project (presumably in an economic fashion). I can tell you this not in 15 minutes, but in 15 seconds—'everything'.

Obviously you will require some details of the former rather all-embracing word, but before I give you this I think I should stress the basic difference in the manner of reimbursement received by the professional gentlemen who have preceded me (the architect and the quantity surveyors), and the builder. Professional gentlemen receive (or should receive) fees on an agreed scale, and the manner in which they compete one with the other is in the scope of the service, design, supervision, etc., which they offer, but there should not be any variation from the scale of fees which presumably are designed to enable the professional gentlemen to earn a living.

The builder offers not only a similar measure of service, but also usually a very competitive price which in most instances contains only a very modest return for his overheads, and seldom any margin for the builder. The price offered by the builder in this competitive market is, more often than not, based upon the assumption that the drawings and details required for the work will be available in such time and order as would enable the work to proceed in a well phased and economic sequence.

It therefore follows that should this information not be forthcoming the contract could be deemed to be vitiated. This is a most important point, and one which is not fully recognised by both the architect and the builder. Unfortunately the occasions when a proper volume of the necessary detail and information are available at commencement of the works are becoming fewer and fewer, and this state of affairs seems to have become more prevalent since 1939, mainly due, I fear, to the client pressing for a start at the earliest possible moment because of a number of factors, many of which are political.

It therefore would appear that one of the most important duties the architect has is to restrain his client from making a hasty start, and due to this, a very tardy completion. After all, the date that really matters is the completion of the work and not the date upon which it commences. Time spent on the drawing board is cheaper than time wasted on the job, both from the client's, architect's and certainly the builder's point of view. A few extra weeks spent on the drawing board before work is commenced will lead to fewer delays, vacillations, variations, claims and recriminations.

There are still many who feel that the quantity surveyor and the builder do well out of variations, but such is seldom the case. The builder does not want them, and I know that to the quantity surveyor they are a financial 'pain in the neck'.

I think I have made it quite clear that in my opinion unless the architect starts off right there is little likelihood that the job will.

Let us therefore assume that the architect is competent and having in some miraculous fashion controlled his client; what information should the builder receive and *when*?

For the purpose of the times which may later be quoted, we must have some idea of a typical contract, and it is assumed that the contract in question is a large job.

The Type of Information required when tendering for the Scheme

The builder should have access to all the information which the quantity surveyor has had from the architect, and this should include an accurate bill of quantities, a specification, and one or two $\frac{1}{8}$ in. scale drawings showing the general layout and elevations. These will considerably assist the builder and his estimator when preparing the tender and often prevent a lot of 'phone calls from builder to architect and/or quantity surveyor and thus avoid wasting a lot of time in both these offices. The extent of the drawings sent with the bills of quantities at the tender stage will depend upon the type and volume of the work, but if the building has a reinforced concrete frame or other special features it would be an advantage if a copy of the structural engineer's drawing or drawings were also sent to the builder in order that he may acquaint himself with the type of frame to be erected and obtain a good indication as to the repetitive element in formwork. The bill of quantities should convey to the builder, so far as is possible, the work to be carried out and if an indication can be given as to the more repetitive items then it is likely that economies may result. If trial borings or details of trial borings or trial holes are available, details of these should either be available or sent with the tender documents to the builder. This also is important as it can considerably influence the method of carrying out any work in the ground and seriously influence the prices. No architect should embark upon a job of any magnitude without having trial borings taken and a proper soil report prepared.

So far as is possible select builders of repute with experience in the type of work you have in mind and of a similar status in the industry. Do not have too large a list—six is usually plenty. Give them a reasonable time to prepare their tender (four to five weeks), and you will find that you will get far more genuine tenders in this way than inviting 20 people and giving them three weeks to prepare their tender. Having received your tenders and received the decision of your client, inform the unsuccessful builders immediately so that they can write that job off their books and give their wholehearted attention to the next inquiry. Do not keep them hanging about in a state of suspense.

The order and sequence of the following information will of necessity vary according to the type of work, but the following may give you some idea as to the way in which a builder would like the information as distinct from the way it is usually handed to him.

Firstly, avoid so far as is possible any drawings or information which is marked 'preliminary' or 'not to be worked to'. This is fraught with danger and most confusing.

Information usually required

(*a*) Site layouts showing existing and proposed levels and contours.

(*b*) Complete and accurate setting-out details with tying-in dimensions to permanent bench marks.

(*c*) Complete information, sections and levels of road construction and drainage with invert levels at which connections are to be made.

(*d*) Positions and details of connections, with levels, of all public utility services (soil and surface water sewers, telephone, water and gas mains, etc. etc.).

(*e*) Detail of the permanent fencing arrangements (this can often effect a saving on the work, as if the type of fence has been decided upon and can be quickly erected it may provide adequate protection and minimise the amount of watching and lighting otherwise required).

(*f*) Complete $\frac{1}{8}$ in. scale layouts of all buildings with proper elevations and sections.

(*g*) $\frac{1}{2}$ in. and full-size details as required to amplify the last.

(*h*) Complete door and window schedules which should contain all particulars relating to the window or door, the frame, the cramps, the architraves, ironmongery and fastenings, the lintels, the sills, painting and polishing, etc. This door and window schedule should show an opening number for each door or window which should correspond to a similar number on the plans, thus g.d. 1, would mean ground-floor doorway 1, and f.f.w. 1, should indicate first-floor window 1. This numbering provides an easy method of reference for architect, surveyor, clerk of works and the builder alike.

(*i*) Full joinery details.

The earlier these are available the better joinery you will get.

(*j*) Full structural drawings whether of reinforced concrete or structural steelwork; and if reinforced concrete work, all bending schedules and rod diagrams should be available at an early date, such structural drawings if complete will also enable the builder to decide on his method of construction, the type of moulds and whether or not he will precast any of the members. This is all work which can be usefully carried out prior to the actual execution of reinforced concrete work.

(*k*) All details of nominated p.c. subcontractors and suppliers showing details of prices, discounts and conditions. All of which should tie up with the main contract conditions.

(*l*) Full and complete drawings of all mechanical and engineering services showing the runs of all pipes, conduits, fittings, points and sanitary appliances. This should cover all the electrical, heating, hot water, plumbing, telephone and similar services.

(*m*) Schedules of all wall, floor and ceiling finishings so that the type of flooring, wall finishing, glazed tiling, painting or polishing, etc., of wall, floor joinery and ceiling finishes in every room can be clearly ascertained. Glazing schedules showing the types of glass to be installed in all windows, a schedule of any partitions or special fittings. Details of lifts and metal work and all other similar drawings affecting construction which are too numerous to mention in detail.

Lastly, and as a general recommendation, try to build with local material. Remember that the builder usually starts from the bottom and works upward. Try to imagine yourself fixing the materials you have specified and shown on your drawing, remembering always that very often these fixings are carried out under adverse circumstances, either at the top of a ladder, trestle, or scaffold, and sometimes 100 ft. in the air. Try to avoid criticism such as I read in an American magazine where reference was made to an architect 'who thought only in line, form and colour and was airily indifferent to the everyday realities of hammer and saw construction'. Remember that techniques which one often sees abroad are economic only because in that country they suffer from a lack of materials available here; have due regard to the relative relationship between labour and materials in different continents. As an instance, in America timber costs less than one-half of an hour of a craftsman per foot cube whereas in England it costs $2\frac{1}{2}$ hours per craftsman per foot cube.

DISCUSSION

Mr. Bruce Martin [*A*]: I should like to begin by thanking our speakers, on behalf of us all, for the extremely orderly way in which they have each outlined the sequence of operations within their own province and how close they were to everyday

experience. Nevertheless I seemed to observe a remarkable discrepancy between the different speakers on the sequence of operations. I wonder whether this is because they are not really satisfied with their present methods. I noticed each of them outlined methods and then talked about what they want, what they require as against what is happening, and they went on to make alternative suggestions.

I suggest this cannot be avoided at this stage. We are in the grip of a vast change which is going on in the building industry: we are rapidly changing our modes of construction from what we might loosely call 'traditional' types to what might be called 'industrial' types. I think that because of this it is very difficult to outline any orderly sequence of how to do anything, unless you state at the beginning which type of building you are engaged upon, or even whether you are trying to build something half-way between them.

To give a simple example; traditionally, you must put the walls up first, the roof next, and, finally, come in with windows. With a frame job it is more than likely you put the frame up first, then the roof, and the walls may well be one of the last items on the job. This discrepancy in sequence of operations goes a long way to explain why there is no means of marrying up the order in which the architect produces the drawings, the order in which the quantity surveyor would like the drawings, and the order in which the builder gets them. They are all different. The traditional bill of quantities in fact has an order laid down, which in essence came from the original sequence of trades. I am not at all sure that that sequence holds good any more.

I would put in a personal plea for serious consideration of this question of elemental bills. Mr. Sweett said an elemental bill requires elemental drawings: that is automatic, and that is the virtue of it. All our speakers have been breaking down buildings in different ways: if we made a complete list of all the elements that go into a building we should find all these elements would be used more in some buildings and less in other buildings; but all building can be broken down into elements. The virtue of doing so, and building up drawings, bills and specifications on these broad headings of elements, is that we are freed from the question of sequence. An elemental bill can be compiled element by element to an order agreed by all those concerned with the job, and when the time comes it can be put together as 52 items. The final way in which you bind and put the bill together need not be the way you have gone about the work. You can put it together in the actual sequence of the operations of the builder on the site. It goes without saying that a complete list of elements arranged in a bill of this kind automatically gives you an index to the main sections.

I want to dare to suggest that as far as the future is concerned, the elemental might be the thing on which we can hang uniformity. We need unification: we are in a stage where we are trying to get out of an old way of building and move towards the new ways.

I am very much in sympathy with Mr. Campbell on duplication, or as I would call it, triplication. Someone pointed out to me recently that a certain building near Hyde Park Corner had in fact been built three times—the steel frame, the solid brickwork, and the stone building with Corinthian columns; therefore the building had been built simultaneously as a Greek temple, a Georgian house, and a steel frame structure. This is very much the sort of state we are bound to be in in a transitional period; we have not the vision and courage to throw over the old and clearly see the new.

Towards this general question of simplification, and avoiding duplication, I would like to say one more thing in regard to the idea that the tolerances on dimensions should vary according to the nature of the material. I do not question this as being a fact, that ultimately the actual sizes to which we size all the things in building have different tolerances, but one of the biggest ways of moving towards simplification with respect to dimension is the modular concept of only using nominal round sizes. Forget $\frac{1}{16}$ in., $\frac{1}{8}$ in., $\frac{1}{4}$ in. and $\frac{1}{2}$ in.; throw the lot overboard, and work only with round dimensions. Right the way through the drawing office we should have a more simple approach, always recognising that these are nominals, that is, convenient for getting on with the job. Here the quantity surveyor has a great deal to gain, if he would rationalise and accept rounded dimensions throughout his work. Do not bother about $\frac{5}{8}$ in. and so on; the time spent in working them out is fully offset by the actual money in saving small quantities of material.

The Chairman: We have heard every point of view expressed. To that end, if anyone has any personal slant to contribute we would be extremely interested to hear it. My own personal bee in my bonnet is a horror of over-complication, of letting the drawing be an end in itself. I remember Captain Fox Williams once made an excellent remark, that as soon as he saw one of his draughtsmen drawing a screw, he knew that fellow had too little to do.

The drawing of course is a great help to the builder.

I remember the drawings my father showed me of the time when he was a boy, when there were no prints: the drawing was on cartridge paper, and you had to copy it, one copy at a time.

It would be wonderful if we had to restrict our drawings. Gold-backs are worth the weight of the gold on their backs, but we should watch out for the hundreds of drawings we send out to people, drawings in all sorts of stages of completion, which do not help the job.

Mr. A. W. Cleeve Barr [*A*]: A lot of architects spend a great deal of time thinking how they can simplify building work by spacing walls at regular intervals, by making standardised details, by avoiding building in pipes into concrete and brickwork in order not to interrupt trades and so on. Mr. Tompkins mentioned noting from some documents the extent to which this is done, and Mr. Sweett mentioned that the architect should inform the quantity surveyor what he has in mind.

Given the existing bill of quantities, in what way do they suggest the particular attention of the builder should be drawn to the various efforts the architect has made to simplify procedure on the site and in erection?

Mr. W. Tompkins: The contractor should see the drawings, and will see there is a large measure of repetition, that is, repetition as measured by the quantity surveyor. Normally, the price is related to that repetition. More often, if there is not a large measure of repetition the builder does not put the price up as he should do.

Mr. C. Sweett: Where there is a sufficient element of repetition in a job, a variation from normal procedure is justified, and I think it is reasonable for the quantity surveyor to break down the structure into a sort of Meccano set, and to bill the repetitive elements under headings, so that the estimator can decide the form of shuttering he is going to use, and estimate the number of times he can use it, and reflect that in his price.

That is probably a more useful variation of a conventional form of bill than elemental bills.

The architect and the quantity surveyor have had a lot of time to work this out, and the estimator has very little time, and if you can give pointers in the bill, that is a great help. I see no reason why it should not be done.

Mr. George Fairweather [*F*]: My contribution concerns what I regard as the general acceptance by the platform this evening of the opinion that the architect is dilatory in issuing information to his builders. I find that difficult to understand in the light of several contributions made.

The first speaker outlined an admirable course of work for the development of the project from the stage at which the client enters the office to the stage at which he receives his completed building. It would seem information was prepared completely in three forms: the client received information fully to describe the work to the last detail, at an early stage of the project; the quantity surveyor was instructed, again with full information, from which he prepared a comprehensive and complete set of quantities and specification; finally, the contractor was instructed (presumably on the basis of the lowest tender) and there were no drawings available for him. The work, however, was fully available in two other forms.

In fact, the architect does not, and should not waste his time discriminating between the susceptibilities of his audience when he prepares his instructions for the building. If we accept the state of affairs described this evening, we are still gentlemen in this

profession, and we speak to the client with one accent, we advise the quantity surveyor with another, and we order the builder with another, and we have not, at the time of going into the contract, prepared our orders for the builder. That is not the position: we can make no headway whatever in a building project if at the time of entering the contract we have not all the information available for the builder, and in fact it is merely a matter of sending it out at the time the contract is entered into between the parties. I submit that that is in fact average standard practice at this time.

My question is, how in present circumstances these admirable economies suggested by Mr. Tompkins can be passed to the pocket of the client.

Mr. Tompkins suggested we should enter into a contract with sympathy for the builder, and I strongly support that view. I am happy to concede that by issuing my drawings showing the boundaries of my site, the builder might be able to save the cost of temporary fencing. I do not expect him to yield the benefit in his price. To relieve the builder of replacing door frames after they have been installed and painted, by giving him his information earlier, so that bad ones can be rejected before too much money has been expended on putting them in, might be a saving. Such items might show commendable profits by closer collaboration between architect and builder, which might be achieved in the average practice of today; but we are bound by certain formalities in methods and systems we use for the production of drawings, and also, I dare suggest, in the methods of preparation of specifications and bills of quantities.

Can Mr. Tompkins and Mr. Sweett explain how these benefits can be passed to the employer by the diligent architect?

Mr. W. Tompkins: Very few architects know the composition of the final bill. If the builder has had to do a lot of cutting away, he gets paid, and the client pays in the long run for all the architect's failings. This is always reflected in the next price the builder puts in. You speak of 'average' architects, but I do not know such a gentleman. They are good, or bad.

Mr. C. Sweett: Contractors know what sort of information they will get from the architect when they tender. They allow for that in their price.

Holes and chases are mentioned in the bill as either 'leave' or 'form' or 'cut'. If it is 'leave' or 'form' they may cost 3*d*. 'Cut' may cost 10*s*. to 12*s*., and it is passed on to the employer.

Mr. W. Tompkins: Quantity surveyors put in their bills 'leave' or 'form' or 'cut a hole'.

That infers that the contractor would have the opportunity to do one of those three things, but he has to have the information, to have the opportunity of leaving the hole.

Mr. G. Fairweather [*F*]: I think the question has not been made clear: I did not mention holes. I spoke of the benefit from the builder cutting frames for doors in good time.

The other point was the benefit by fencing with permanent fencing instead of temporary fencing.

How can these benefits be passed on to the employer?

Mr. W. Tompkins: It is always cheaper to build in the frame instead of going back to fix afterwards. If you order your joinery quickly and get it built in, it is cheaper, and you have a better job. You have a chance to see the timber is seasoned properly, and to throw out bad parts. This, of course, is a policy of perfection, but a plan we do not achieve is better than no plan at all.

Regarding fencing, if you give the builder the fencing order early on, he saves temporary fencing, lighting and watching. You may not get the benefit that time, but you will get it the next time.

Mr. Howard V. Lobb, C.B.E. [*F*]: Any building operations are nothing much short of a miracle, but the architect can do very much more than is done. Mr. Tompkins said he has never seen an average architect. This is a constructive point not generally realised: the architect possibly prepares for his clients a perspective or a model of a building. I have found it to be a very great help to get a large photograph of that perspective, to give that to the contractor to put in the mess hut or foreman's office, or make the model available on the site. On a large job a small exhibition of the work of the architect goes down well, with a talk to the builders about the building while it is still in the drains and foundations stage. This gives them an interest in the job, and helps productivity.

In one or two jobs during the war, building a factory canteen, where we had a continuity of work, the client was inspired with the problem of human relations, and the first meal served in the canteen was to the chaps who had built it. This was sincerely appreciated by them, and they went on building the further things in and around the industrial plant with much greater goodwill. We as architects can do a bit to improve the relationships in a team if only we think about these things. Perhaps Mr. Tompkins will comment on that point.

There are one or two other minor things: contractors tendering for a job very greatly appreciate two copies of the bills of quantities. It enables them to cannibalise one copy, send bits out to sub-contractors and suppliers, and get the prices in quicker, and we find it helps in the preparation of competitive tenders. We have persuaded our quantity surveyor friends to avoid the binding up of bills, and have them in a loose-leaf form, which enables them to be split up by the estimators in preparing their price.

Mr. W. Tompkins: I agree about giving the builder two copies of the bills. Most of us do split them up.

I also agree entirely about the relationship between the builder and the architect. Before he starts, the architect should have a long session with the builder, to see whether any economies in design and construction can be made without materially altering the architect's scheme; this is a good thing, and results in useful savings to the builder and the employer.

I would say, if you treat the builder as a gentleman, he reacts accordingly; if you reckon he is a rogue, you are in for trouble.

Mr. T. Hargreaves [*A*]: I would like to support what Mr. Lobb said. There are substantial advances in the way architects are respected by the building trade, and are sharing in the excitement of the building industry. In a recent symposium organised by the Preston and Blackburn District Society, quite a few young building foremen attended a week-end course. We feel there are many opportunities for the joint education of the builder and the architect.

Mr. John B. Bickerdike [*A*]: Modern buildings are causing many complaints: that must be one of the biggest sources of complexity.

With regard to services, so far as the building fabric is concerned, holes and chases, and so on, I have had the feeling that the consulting engineers are not supplying the architect with sufficient information at an early stage. One gets some information, but it is difficult to get real sizes of bends, sizes of equipment, at adequate stages. I suggest that is one of the sources of trouble. Engineers are not attempting, or are not going out of their way, to supply architects with information.

Boiler-houses are an example where architects usually leave too little space, and the engineer asks for too much. I put in a plea for co-ordination between architects and engineers, particularly heating engineers.

Mr. Sweett gives the impression that quantity surveyors advise architects on costs, and cost of building, at design stage. I have never used Mr. Sweett as a quantity surveyor, but my experience of quantity surveyors in general is that they do not and cannot advise an architect on actual costs. What is required is an adequate costing service. This is reflected in the Architectural Press at the moment, who are publishing just the kind of information the architects have been looking for for a long time.

Mr. C. Sweett: We have come back near to elemental bills. I think it must be terribly difficult for an architect, even with the help of the Architectural Press at the moment, to calculate at the design stage the cost of a building. My own experience is that quantity surveyors can be useful at this stage.

Mr. Bruce Martin finished what he said by suggesting that this was a period of transition, that we should have the courage to throw over the old and clearly see the

new. The difficulty at the moment is clearly seeing the new.

Elemental bills are not really frightfully revolutionary. The bill of quantities prepared in the traditional way is in effect an elemental bill. The basic difference lies in a re-grouping of trades, and there may be something in it, but we do not know what form they should take. We have not sufficient evidence from the body of opinion of architects, quantity surveyors, contractors, specialists and other people. Until we do know what they think about elemental bills, whether in fact they have the advantages which have been suggested for universal application, we cannot clearly see the new, and we should be unwise to throw over the old.

We cannot measure non-traditional materials in a traditional way. I do not know that that is necessarily a reason for measuring traditional materials in a non-traditional way.

This question of cost is very complex. The integral parts of a building are interrelated; if you change one thing it affects many other parts of the building. I do not think it is possible, in the form of elemental bill we have been talking about, to reflect all these conditions.

The Ministry of Education have done a very good job in keeping down the price of schools. I assume a type of elemental bill has contributed something to that, but I do not think any of us can apply elemental bills to the whole range of construction, because we have not yet had time to consult everybody. I would advise Mr. Bickerdike to consult his quantity surveyor in the design stage, where he could be helpful.

Mr. T. B. Harper Ellis [*A*]: We have the electrical consulting engineer in our office for discussion. With a fair-faced brick job, particularly with clerestory lights, for example, we discussed distribution panels and intakes. His drawings came along, and showed some star-shaped diagrams. We sent the drawings out with the specification, and it was left to the successful contractor as to the route he took from distribution panels to circuit.

We can never finish drawings; they are completely in the hands of the fitter on the site.

There is a lot to be said for bills of quantities for electrical work and mechanical services. The architect knows what is to be carried on.

For electrical work we add 1½ in. to floors.

Mr. R. Baden Hellard [*A*]: Taking up Mr. Sweett's point, I do not see how a quantity surveyor can be expected to prepare elemental bills unless given the framework to which he and the architect can agree to work.

Mr. Bruce Martin said this indecision was due to changes we are going through in the industry. In our office we have produced elemental drawings on eighteen jobs. While we have not yet successfully related these to an elemental bill, nor can we say they will do for all jobs, I think we should reserve our final opinion on this matter.

We have heard about the team work necessary.

Mr. Sweett referred to the Simon Report. It should be capable of describing everything verbally to the contractor. Does he agree with the Simon Report? If we do follow that line, and there are legal reasons for doing so, we might end up with a half-page description on which way the door swings. Could he describe shortly an elaborate moulding as adequately as a drawing would show it? Drawings are not generally contract documents.

If we combine our information to the builder, it might make for brevity. If we had composite documents, might we not have the simplicity that gets buildings built properly?

Mr. C. Sweett: I do subscribe to the Simon Report, and I think all that is necessary in a bill of quantities is sufficient information for the builder to price the item. He does not want to know in the bill of quantities which way the door is hung, nor the particular form of a moulding.

Elemental drawings, elemental bills, are things we must consider. We must not dismiss them until they have been fully considered by the whole industry, and some consensus of opinion obtained. I am not dismissing them, but there may be snags. It obviously suits the particular practice of Mr. Baden Hellard, the last speaker.

Mr. H. Werner Rosenthal [*A*]: Team work is important; there should be team work between the structural engineer and the service engineer and the architect, because it affects the design process at an early stage. Say you have to run an air conditioning duct along a ceiling: it may have to run through a girder. In concrete that can be serious. You often want to run them near the edge of wall and ceiling, which is probably the worst point to have a hole in a girder. If you are aware of things like this at an early stage, it may affect the layout of the whole plan so far as stanchions or beam runs may be affected.

I have heard of a way this has been dealt with in Holland, where builders are called in as consultants, for a fee, and they are still allowed to tender, and may or may not get the job. Their advice is valuable, and they know it; no one is the worse off, and the architect and client are better off.

One drawing has not been mentioned, and that is the perspective; not the great perspective that goes into the Royal Academy, but the quick perspective which should be made, to impress the client. Clients cannot read drawings, and to take working drawings, or ⅛ in. scale drawings to clients, is a waste of time, but little perspective sketches, or coloured ones, carry a lot of weight, and help us to get that architecture done which we want, in spite of the client.

Mr. Vivian Levett [*A*]: The whole platform started off from the assumption that we are talking about buildings that are competitively tendered for, and there was this general acceptance of the fact that there is an ideal procedure, an ideal programming and state of completion of the drawings rarely achieved in actual practice. Are we ever going to get to the stage where we can hand Mr. Tompkins (the builder) a neat pile of drawings, with no questions whatever to be asked? I doubt it: not until Mr. Bruce Martin can give us a modular system we can all accept.

Who is the chap who should sort out the order of trades? In practice, it is left to the foreman on the site. He decides where to put the service runs, and they do not suit the architect, and we have argument as to whether the architect can demand that a service be re-run or not.

I would like to have some idea; could we all come here again one day to discuss this question of whose job it is to draw up the schedule and see it is worked? Sir Thomas Bennett has been telling us it is one of the jobs the architect should do, and the clerk of works should administer on the site, but I doubt whether it often happens that way.

Mr. W. Tompkins: My firm is building in America: very often we do build for an architect direct, and it is not unusual for him to give us 500–600 drawings the day we sign the contract, to include all the consultants' drawings, the whole of the electrical and heating lines—everything.

Let us get this straight: it is the architect's responsibility for all the consultants' work, and there should be no argument whatsoever as to whether the heating or electrical piping goes in one spot or another. It should be shown on the drawings: the builder or the foreman should not be able to put a pipe in the wrong place.

Mr. K. J. Campbell [*A*]: I do not feel hopeless about this though probably I painted some of the blackest pictures this evening. I think it is perfectly true that architects have not been all that much better in the past when there was a traditional method of building, but I still think that as we steadily develop a vernacular of contemporary building in terms of structure, we shall find a solution to these problems of providing the right thing at the right time. If we take a professional rather than an amateur attitude towards our work, that will help. It is essential we should take a more realistic and courageous attitude towards the time that should be allowed for the preparation of information for building.

It is easier for an architect in public works, for although he may be kicked by his committee he will not lose the job for delay, but a man in private practice needs adequate time.

The Chairman: It only remains for me to thank most warmly, on your behalf, the gentlemen on the platform who have come here to talk to us, especially those who are not architects, and therefore have done it out of an excess of kindness of heart.

The motion of thanks was carried by acclamation, and the meeting then terminated.

The R.I.B.A. Annual Dinner

Held on Wednesday 27 February at the Dorchester Hotel

The President, Mr. Kenneth M. B. Cross, in the Chair

MR. MINISTER, Your Excellencies, My Lord Mayor, My Lords, Ladies and Gentlemen,

My duty is to propose the toast of 'Her Majesty's Government' but I am very sorry indeed to tell you that unfortunately, owing to a very pressing private and personal reason, our chief guest, Mr. Henry Brooke, Minister of Housing and Local Government, cannot be with us after all. I am sure you deplore his absence equally with myself. I am, however, very glad to say that we have persuaded Dame Evelyn Sharp, Permanent Secretary of the Ministry, to step into the Ministerial breach—not breeches!—I therefore propose slightly to amend the toast:

'Her Majesty's Government and the Civil Service.' I may remind you that Dame Evelyn was the first woman to be made a Permanent Secretary. She is, I may add, a very good and candid friend of the Royal Institute.

This is for us architects a very happy occasion; dull care is set aside; all the clatter and bustle of our harassed lives are stilled for a few short hours and we have the supreme pleasure of asking some of our special friends to dine with us.

If Mr. Brooke had been with us I should have told him that I had watched his great achievements with admiration but without surprise since I first had the honour of meeting him on a building committee in 1938. There is no one I would more warmly welcome to the Ministry of Housing and Local Government than the late Financial Secretary to the Treasury, particularly in these difficult days when finance plays such a large part in all our activities. I know that under Mr. Brooke we shall continue to receive from the Ministry that consideration and courtesy which we have received in the past.

I am happy to be able to report that our relations with Her Majesty's Government remain friendly. Of course we should like some more petrol because we are interested in our work and like to be able to see that the contracts are being properly carried out: this applies particularly to our numerous members with country practices.

We also sometimes think that the continuation of the intolerable burden of direct taxation so many years after the war indicates that the Government wishes to liquidate the professional class. I am sure this is not the case; whenever I have had the privilege of meeting individual members of the Government I have found them all perfectly charming and I am sure they do not mean us any harm.

As you are aware, Mr. Minister, this Institute was founded in 1834 and more than half of our long and varied life has been spent during the reign of Queen Victoria who allowed us to use the title 'Royal' and who also instituted the Royal Gold Medal which Her Majesty the present Queen most graciously continues to present annually.

Let us with your permission endeavour for a moment to recapture something of the flavour of Victorian times with two anecdotes from the Memoirs of Princess Marie Louise. First, to get the setting right, you should know that at a Royal Dinner Party in those days pages spread napkins over the long trains of the ladies when seated at table lest any food should fall upon them. (How the waiters managed the service is not known.) At this particular dinner party, during the Russo-Turkish War the Duchess of Teck addressed Mr. Disraeli as follows:

'What are you waiting for, Mr. Disraeli? The Queen is for you, the army is for you. What are you waiting for?'

Mr. Disraeli: 'The potatoes, Ma'am.'

or the widowed Queen Victoria driving with Lady Errol:

'Oh, Your Majesty, think of when we shall see our dear ones again in Heaven.'

'Yes', said Queen Victoria.

'We will all meet in Abraham's bosom', persisted Lady Errol.

'I will, however, not meet Abraham', said Queen Victoria.

As many of you know, it was in Victorian times that the Provincial Societies were started which have now become a very complete network of Allied Societies supported by Chapters and Branches throughout the British Isles. This organisation is now doing yeoman service in dealing with local architectural affairs and in keeping close contact through the Allied Societies' Conference with the parent body.

There has also grown up during the present century a large number of Allied Societies and supplementary bodies overseas. Of recent years we have been faced with a series of problems concerning education and registration which, owing to varying conditions in different places and different standards of qualification, are extremely complicated. Either we must resolve these problems and pursue a policy of development and expansion in company with our Allied Societies overseas or else we must face a future in which we are likely to forfeit much of our influence abroad and confine our activities to the British Isles. For myself I favour the more progressive alternative because I think that not only have we, with our considerable experience, a great contribution to make in guiding the destinies of the Allied Societies and of the schools in the vast and new countries but we ourselves should benefit from continued association with more recently developed peoples, sustained by their enterprise, strength and vigour and stimulated by the exchange of ideas connected with architectural and building methods. Moreover, some of our younger members, concerned about the restrictions and taxation here, are looking wistfully overseas.

It may well be that in the future it will be necessary to establish an Overseas Conference consisting of, say, two representatives of each of the various Allied Societies whose meetings could take place, perhaps every three years in different localities in rotation, such as Canada, Australia, South Africa, New Zealand, Malaya or the United Kingdom in order to achieve a measure of co-ordination.

And so, with a view to helping to strengthen the bonds of friendship and in order to discuss the problems which I have referred to, I am to set forth next month, with the Secretary, and make personal contact with some of the Allied Societies abroad.

We have accepted the warm invitations of the Societies concerned to visit Singapore, Australia, New Zealand and Canada and hope to have the opportunity of meeting our members in all the chief cities in those countries. We shall include the Annual Convention of the Royal Australian Institute of Architects at Melbourne, the 50th Anniversary of the Royal Architectural Institute of Canada and we are calling at Washington to attend the Centenary celebrations of the American Institute of Architects.

My intention to represent the Royal Institute at the American celebrations is in the nature of a token of friendship and goodwill from British to American Architects at a time when such a gesture from one professional Institute to another will have significance.

Quite recently Mr. John Betjeman, known to you all as journalist, lecturer and critic, has been elected an Honorary Associate of this Institute, and it might be appropriate if I were to submit for your consideration a sample of his art.

It is called not 'Sentry-Go' but 'Sentry-Gone' and is intended to illustrate the efficacy of a question in Parliament: 'Some time in the 'fifties an old general, descending the Duke of York's Steps, was almost ridden down by two tipsy subalterns galloping up them for a bet. A Parliamentary question followed and to prevent a recurrence of the incident a sentry was placed there. Twenty years later, noticing that the sentry was getting wet, a soft-hearted M.P. asked another question and, as a result, an ironwork

canopy was placed above him. Twenty years later, a retrenchment-minded M.P. asked a question about the waste of military man-power and the sentry was removed.

'Twenty years later, a tidy-minded M.P. asked a question about the rusting fragment of an iron canopy, and the Board of Works sent a man to saw it off. Today the rust stains remain though the crevices have been filled with concrete. If the monument is cleaned, I hope two tipsy subalterns will ride down another general.

'Long live the Constitution!'

Your Excellencies, My Lord Mayor, My Lords, Ladies and Gentlemen,

I have the honour to propose the toast of Her Majesty's Government and Civil Service coupled with the name of Dame Evelyn Sharp, Permanent Secretary to the Ministry of Housing and Local Government.

Earl Attlee, K.G., O.M. [*Hon. F.*], talking to Mrs. Holloway, the wife of the High Commissioner for the Union of South Africa. On his right is the Rt. Hon. Sir Eric Harrison, High Commissioner for Australia

Dame Evelyn Sharp, D.B.E., Secretary, Ministry of Housing and Local Government, in response, said:

I must begin by telling you that my Minister asked me to convey to you his very great regret, not only at not being here, but at having to give such short notice that he could not be here. He knows you will understand the reasons why he could not come.

Your President said that I would step into the breach. You will appreciate that I cannot nor would I attempt to answer for Her Majesty's Government. All I can tell you is that my Ministry is going on all right! My Minister, since he took office seven weeks ago, has had as choppy a passage as I have ever seen a Minister have, but he is still afloat and he has not taken on much water! As a matter of fact he was looking forward to this evening as a real piece of relaxation. He does not yet know about architects! He said: 'They will not talk about rents; they will not even talk about rates; they certainly will not talk about local government finance and reform, and they will not talk about roads going round, through or under Oxford! So,' said the Minister, 'I shall have a quiet, perfectly relaxed time and say a few words about how well the Government is getting on.' Then of course he found that he could not, and when Mr. Spragg approached me he said: 'Well, of course, you can read the Minister's speech,' but, as I say, the Minister has not written a speech. He was only going to say a few words!

I did think of talking about the part of our work dealing with the public control of architecture, which is something which comes our way and which is most difficult. I am in fact doubtful whether we ought to have it at all. Let me say that for the last ten years I have been writing the speeches delivered to the Royal Institute of British Architects by the Ministers, but they have never got round to that!

I really do feel extraordinarily doubtful whether it is a good thing to attempt this public control of architecture. I should like to see architects free to design whatever kind of buildings they like and however high they feel inclined to design them. I am so afraid that with this public control of architecture, even control by the highest in the land—I refer of course to the Royal Fine Art Commission—it will completely suppress all adventure and all excitement and experiment in architecture; and although I would certainly think that one must retain control over the bulk of what we call 'plot ratio', the site and the line of architecture, I sometimes think—and it is so easy for me for I am not really responsible being only a Civil Servant—that I should like to let it run free. As I say, I have offered this sort of speech to six Ministers and none of them would make it!

When I think about this I venture to consider what has happened to architecture in this country since the war. I think that in one or two fields it has done superbly well. It has done extremely well in the field of local authority housing. I think it has done well in the educational field—school building. I also think that it has done very well in the industrial field. I do not think that it has done very well in other fields! I wonder whether it has not done exceptionally well in those fields because they are all really free from public control when you come to think of it. When it comes to housing and the educational field, it is the municipal architect or the county architect who is doing the work and he is not being controlled; and when you come to industrial building on the whole probably control does not apply so greatly. Is perhaps some of the difficulty which commercial architecture has encountered due to the fact that everybody knows better than the architect what he ought to be doing? However, that is only an opinion of mine and you will never hear about it again because you will always have Ministers!

I did glance at the official brief offered to the Minister and I saw one of the headings was simply 'Subtopia', and when the Private Secretary came in and said to me 'They want you to make the speech', he added 'and you can think what to say about Subtopia!' On the whole I do not think I will say anything! I could say a good deal, but I do not think I will say anything. I will leave that to the Minister the next time!

There is, however, one thing I should like to say about what the President said. He made some remark to the effect that he was sure if the Minister had been here he would have got him to convey to high quarters the effect of taxation on professional people. You and I, Mr. President, have to be careful about this! In one of the letters to THE TIMES this morning I see that one of the suggestions is that the Chancellor, with whom I have remarkably little influence, should adopt some of the recommendations of the Royal Commission, and one of those recommendations was that single people's super-tax should start lower down! I can see that there may have to be a closer partnership between the Ministry of Housing and Local Government and the Royal Institute!

May I conclude by conveying to you and to the Secretary my Minister's very good wishes for this remarkable tour on which you are embarking. We congratulate you on the enterprise which has led to the organisation of the tour, and wish you a most successful tour.

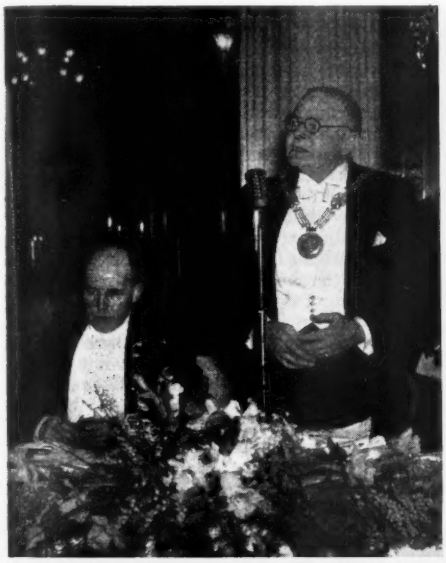
Professor Sir William Holford, M.A., P.P.T.P.I. [*F*], in proposing the toast 'Our Guests', said:

The risk you took, Mr. President, in trusting me with this ancient and honourable toast tonight was not that I should indulge in professional patter to the guests, for, as you have said, this is a festive occasion. Nor, I think, that I should advance yet further proposals for St. Paul's and perhaps try to put a particular guest on his defence! He has already been put on that by Her Majesty's Government, and I am very sorry indeed that we cannot have either Mr. Duncan Sandys or the Minister of Housing and Local Government with us this evening.

The real risk was that no one, and least of all myself, could do justice to such a splendid and varied list of guests as we have here this evening. There is only one thin thread of coincidence which I find attached to this arrangement. Many years ago the site on which this hotel stands was the London home of a distant and much wealthier branch of my own family! Now it has come so high up in the rarefied air of cosmopolitan London that it is almost a sort of alpine refuge! I was going to say McAlpine refuge! So it is particularly pleasant for those of us who cannot actually stay in Park Lane—at least, not out of earned income—to come and visit here just occasionally, and, of course, it is you, our guests tonight, who give us a proper excuse. So we are extremely grateful to you. Our own headquarters, I am sorry to say, in Portland Place are not large or Babylonian enough to take you all in! The paradox is that it is only for these few hours that you are our guests. At most other times you are our clients and therefore our hosts. You are more than that; you are our patrons, and our matrons, if Dame Evelyn will forgive me, and I am sure she will not! You are our circus masters and customers. You turn on the taps of the building industry and you turn them off. We live because of you. You take us in, put up with us, are bored and occasionally pleased by us! You spend money on us and you never really get rid of us! Tonight we are able to turn the tables on you and become your hosts. We place you, like noble if slightly hazy sculptured figures in a great architectural composition of our own design. Tonight, and just for tonight, you are gods come down from Olympus, and we put you on a pediment. I need say no more. A nod to a god is as good as a wink!

Of course there are pediments and pediments! Those of you who go to the zoo or otherwise know Regent's Park will recollect the pediment of the central feature

Mr. Kenneth Cross, President, R.I.B.A. Next to him is Mr. N. A. Robertson, High Commissioner for Canada



Dame Evelyn Sharp, Secretary, Ministry of Housing and Local Government. On her left is M. Chauvel, the French Ambassador, and on her right is Lady Welch, the Lady Mayoress

Sir William Holford, proposing 'The Guests', and Lady Holford

Sir John Cockroft, O.M., K.C.B., F.R.S., responding

of Cumberland Terrace, which is full of allegorical figures in white plaster. The modeller of these figures was an indifferent sculptor called Bubb, whose anatomic knowledge, though heroic, was inadequate! The residents, according to Sir Albert Richardson, having noted their strange muscles and bubbling torsos nicknamed each figure individually as Sciatica, Gout, Arthritis, and the like, and they were known collectively as Bubb's Pains!

Our pediment of guests tonight is, of course, of a different order altogether. It groups itself so naturally and so gracefully that it might well be called a pediment of Pleasures. In the centre, of course, is a gap. It should have been filled by the Lord Mayor and the Lady Mayoress attended by the Sheriffs and their ladies, and it is just like an architect's luck to lack the central figure for his pediment! I am particularly sorry about the Lord Mayor's departure because he is my most fabulous client! I was going to say that we have given him at least one evening in which he has not had to reply for the Corporation.

This central group also includes our own institutional Mayor, the Mayor of St. Marylebone and the Mayoress, and Lady Pepler, Deputy Chairman of the London County Council with Sir George Pepler, an old friend of architects and an Honorary Associate of the Institute.

This central group is flanked on one side by Parliament and on the other by Diplomacy. Parliament is represented by Lords and Commons, and Diplomacy by the Ambassador of France, with Madame Chauvel, and the Finnish Ambassador with Madame Tuomioja. It is represented also by the High Commissioners for Canada, Australia, South Africa and Ceylon and their ladies. The High Commissioner for New Zealand was to have been with us—and do not assume that he is retiring after his victory in the Battle of New Zealand House! He has merely gone to Ghana!

Your Excellencies, in spite of the fact that you are enticing away in increasing numbers our younger and more adventurous architects, we owe you no grudge for that. Rather we felicitate you on making the opportunities and the architects on taking advantage of them.

We also look to the other side of the pediment to keep in balance, to encourage the spirit of adventure in the architectural field at home and to note what is happening in one of the smaller and one of the largest countries abroad, Finland and Brazil. Finland has produced the Royal Gold Medallist of the year in the person of Alvar Aalto. Brazil has produced so much interesting architecture in the last twenty years that she is now exporting it! In a few hours I shall be flying to Brazil—to a temperature and humidity considerably greater than that of the Dorchester during after-dinner speeches! But to return to my pediment, there are a great many more gods in it yet for me to acclaim. On the right is a fine group of Presidents, those of our sister institutions, headed by Mr. Charles Wheeler, the new President of the Royal Academy and his lady. If anyone should know about sculptured pediments, from that of the Bank of England onwards, it is he. He has a calm and generous character and we must all hope that he has a peaceful reign at Burlington House. I will, however, remind him of Mr. Shepilov's words a week or two ago—'Peaceful co-existence does not necessarily mean a quiet life'!

To all the Presidents of Associations and Institutions we offer our sororal greetings. I do not know why they cannot be fraternal greetings, although all institutions, except perhaps the Atomic Energy Authority, seem to be female! We extend the same warm greetings to the three Chairmen of Councils and Committees and their ladies.

On the left, in powerful correspondence, is a group representing the building industry—Master Builders, Operatives and Employers. I doubt whether the pediment would hold up without them! Nor could we do without those two just figures. I cannot call them 'free-standing' for they are at the prow of very large organisations indeed, yet they stand like cut-waters in the stream of building affairs. I mean, of course, the Permanent Secretaries of the Ministries of Housing and Local Government and of Works or, if you prefer their Olympian names, Hephaestus and Pallas Athene! You have just heard how admirably the last named has filled the breach unavoidably created by her Minister. One is reminded of President Roosevelt's great Secretary of Labour, Frances Perkins, who, when asked if she felt that being a woman was a handicap, replied: 'No, only in climbing trees.'

Then, in those difficult acute angles at the corners, and because they are difficult are architecturally most important, are those key figures, officers and clerks on one side, and the Press on the other.

You will wonder why I have omitted three figures from the pediment altogether—three eminent guests whom we have certainly not forgotten. The reason is that they are on top of it, one at the apex and one at each side silhouetted against the sky. The central figure is, of course, Earl Attlee, an Honorary Fellow of the Royal Institute. What more appropriate position could there be for one who has been our Prime Minister and who is one of the most respected statesmen in the world today.

Also in silhouette are two other figures representing power. They should really be without togas altogether. They are electricity on one side and nuclear energy on the other and are none other than Lord Citrine and Sir John Cockcroft. I have kept Sir John to the last as he is replying to this toast. I have met him in a variety of places; first on a visit to Harwell when designing the buildings for Sir James Chadwick's synchro-cyclotron at Liverpool, then in Capetown as a fellow guest at a variety performance staged by the students of the School of Architecture. Last year I wrote to him to ask if I could borrow some of his radioactive isotopes to blast the death-watch beetle in the roof of Eton College Chapel. There is no limit, Sir John, let me assure you, to the peaceful uses that architects will find for nuclear energy in due time! So it is with special pleasure and a great deal of admiration that we welcome you to a special place on our pediment of guests. But perhaps I had better abandon this metaphor before I get into trouble!

So I shall conclude this toast to our Guests with a quotation from Beckford of Fonthill. He wrote to his friend Franchi in 1812:

> 'Some people drink to forget their unhappiness.
> I do not drink. I build.'

I ask all the architects here to rise and join in this toast to our Guests—to drink and to build—and couple with it the name of Sir John Cockroft.

Sir John Cockcroft, O.M., K.C.B., C.B.E., F.R.S., Ph.D., D.Sc., Director of the Atomic Energy Research Establishment, in response, said:

I am very glad to have the opportunity of replying to this toast of the Guests, and I am sure I speak for all your guests tonight in saying how much we appreciate what the members of your profession are doing for our welfare today. To me it affords an opportunity of expressing my own thanks for all the friendly relations I have had with members of your profession during most of my working life.

It began for me in Cambridge when we built the Royal Society Mond Laboratory, a wing of the Cavendish Laboratory. I remember Eric Gill carving away under cover until to the astonished eyes of Cambridge Dons there appeared a large-size crocodile on the walls of the Laboratory, a symbol of endearment for Lord Rutherford. He also produced a relief carving of Rutherford of somewhat Semitic cast, and in reply to some bitter complaints said: 'It will look like him in a hundred years time!'

I recall later being educated by Sir Charles Peers when dealing with ancient buildings and scouring the countryside for old cowsheds, and taking part in arguments with Professor Tristram on whether it was right or wrong to colour heraldic stonework of the College!

Then I had the great pleasure of working with Edward Maufe on the new buildings of the College, and he brought in Charles Wheeler and others. We also brought in engineers to provide warmth to deal with the Cambridge winter!

During the war I met another group of architects in 1944 when I went to Canada where we had to build a new village in the bush in Ontario. We brought in a MacGill professor to lay out the town with roads weaving in and out the Canadian bush, and the French-Canadian architects produced simple, elegant buildings. We did not have any town planning then, but we did produce a beautiful village to vie with any villages of the past.

We in this country—Lord Citrine in particular and we are associated with him—have this problem of fitting great new nuclear power stations into our countryside. We must have large new power

stations; they must be sited on the coast or estuaries because they want so much water, they must not do any harm to the oyster beds and must not hurt the worms!

Here is a problem to be solved between the architect and the engineer. These power stations are enormous in their bulk. They are like castles and the cathedrals of medieval times from the point of view of bulk, but as the great buildings of the Rockefeller Centre in New York appeal in scale and line, so I think these great new power stations can be made to appeal because of their scale, and because they do stand for nuclear power which is one of the great things of the modern age. I do hope that the opportunity will be taken to fit these great new buildings into our landscape so that future generations will look at them with the admiration perhaps that past generations looked at the Saxon forts and cathedrals.

There are many other problems which also require collaboration between the engineer and the architect. Dame Evelyn skated gently over the question of roads so I shall not refer to it, except to say that American architects and engineers who design beautiful pathways in their cities know quite a lot about how to build roads which do not offend the eye.

We also have in this country a great challenge from the point of view of building new university buildings and technical colleges—buildings for science and technology. We are told we are to have twice as many scientists and technologists whether we like it or not by 1970, and just as these scientists will have to be taught technology of the present and not of the past, so the buildings which you are to put up will represent the modern age and not the past age.

Therefore, I should like once again to say how much I personally have valued the co-operation I have always had and the good relations I have had with members of your profession. Your guests tonight I am sure admire your skill and artistry. They are very grateful for your hospitality, and I return thanks to you on their behalf.

Correspondence

The Editor, R.I.B.A. Journal

HOUSING AT SAN BASILIO, ROME

DEAR SIR,—You will have seen an article in THE TIMES of 11 December 1956 describing a housing estate at San Basilio, Rome, as a lesson to English architects and planners in getting a 'close-knit, urban effect'. All the houses were said to be of two storeys and three bedrooms and to have gardens of 200 square yards each. Yet the density was said to be 200 persons an acre—whereas our new towns could not get above 58 an acre.

This combination of particulars was obviously absurd, but non-technical people have been misled into thinking Italian planners can do what the English can't—get quarts into pint pots.

We have had and studied the plan and the density is actually 48·8 persons (8½ houses) an acre—a very different story. The scheme is more generous in space than most English housing schemes today, and is in fact very attractive.

THE TIMES has not been able to find room for a letter from us on the matter. We regard it as one of extreme importance because the density of housing affects the living conditions of a great number of people.

We are informing you as editor of a journal interested in these matters, and hope you will assist us in making the correct facts known.

Yours sincerely,

SIR FREDERIC J. OSBORN,
Chairman, Executive Committee,
Town and Country Planning Association.

Accompanying Sir Frederic Osborn's letter were the following particulars:—

HOUSING AT SAN BASILIO, ROME

Particulars as given in article in THE TIMES, 11 *December* 1956:

'Close-knit, urban effect by imaginative planning and economy in the use of space.'

Density 200 *persons an acre*. Two storeys. All units three bedrooms. Every house has private garden of 200 square yards. Four children's playgrounds, some shops, and various welfare buildings, included in area.

Correct particulars: as stated on plan:

Total area	84,507 sq. meters	= 20·88 acres
Inhabitants	1,020	= 48·8 per acre (121 per hectare)
Dwellings	180	= 8·6 per acre
Area of green space	6,385 sq. meters	(about 1½ acres)
Area of principal roads	7,759 sq. meters	(about 9·19%)

The dwellings are all in terraces of 2 to 5 houses, mostly linked around quadrangles or pentagons, with one side open, and all houses have open views on at least one side. A system of footways connects backs of houses with playgrounds, etc. Cul-de-sac roads are rather long by English standards. Private gardens average 370 square yards, varying from 155 to 500 square yards. Distances between facing terraces are rarely less than 85 feet.

On the plan the scheme is described as Communité Residenziale: UNRRA-CASSA: Prosettisti—S. Boselli—M. Fiorentino—Architects. The plan is published in TOWN AND COUNTRY PLANNING, March 1957.

MOTOR VEHICLE AND CIVIC DESIGN

To the Editor, R.I.B.A. Journal.

DEAR SIR,—At the recent discussion on 'The Motor Vehicle and Civic Design' Mr. D. G. Lewis mentions the possibilities of a monorail. Apart from this observation, no mention was made of rail transport, in any form whatsoever.

If we wish to attack congestion, promote fast, comfortable, economical, and safe transport for public use in our urban zones, then railways and light railways should be developed, or even introduced in new areas.

The problems of Liverpool and Leeds were mentioned, yet these cities are rapidly abandoning many miles of tramways on reserved track. Town planning authorities were once favourable towards this form of transport. These light railways should be retained and linked together across central areas by subways, with stations inside shopping precincts and commercial 'islands'.

Furthermore such a form of transport is independent of imported fuel, produces no injurious fumes, and the ventilation of subways used solely by electric vehicles is less intricate than those served by internal combustion engines.

Yours faithfully,

FRANCIS W. MAITLAND [*L*]

RAISED ROADS

DEAR SIR,—Now that raised pedestrian decks in urban areas are becoming acceptable to town planners and civic designers, I am encouraged and stimulated into making a parallel suggestion with regard to roads. Agreed that we need bigger and better ones, the difficulty is to lay them down without undue disturbance to existing interests, and sometimes to priceless assets. Perhaps the time has come to consider the exploitation of an existing asset. Why not build new fast roads above existing main line railway tracks?

Before the automatic cries of 'too expensive' rise in chorus, let us consider the advantages, practical and otherwise.

1. The routes are already nationally owned. Think how much this would solve the legal and administrative problems.
2. They are direct and penetrate to the hearts of all major towns. This must save enormously in bulldozing new routes through diverse existing properties, road widening, the acquisition o. avoidance of agricultural land and all the resistance stirred up by disturbance and inconvenience.
3. Where suitable, two levels could be built, one for each direction of traffic, so that fast vehicles could travel in comparative safety. Slow vehicles could be excluded.
4. The difficulty and expense of landscaping and preventing ribbon development would largely be avoided.
5. Labour and materials could be transported to the site during slack periods, and by using prefabrication and prestressing techniques work could proceed without interruption to train services.
6. Branch railway lines, closed down on economic grounds, could be turned into minor roads comparatively cheaply.

As a practical example it might be advantageous to examine the proposal for doubling the Embankment road through London by building over the Thames. A glance at the map shows that a convenient railway line runs roughly north from the western end. Anybody living in this area might be excused, indeed, if they wondered why this capacious avenue of railway lines is not exploited already, for it seems to be seldom used by trains.

Perhaps this idea might be of use in the special case of a town such as Oxford.

Yours faithfully,

G. M. HOBBS [*A*]

PAUL BONATZ

DEAR SIR,—In a hundred years from now our new techniques will have become traditional—if they stand the test of time—or obsolete. Of the new ideas which have stirred us, only a few will continue to make an impact. Very likely the greatest value will be attached to those of our buildings which will have merged, almost unobtrusively, into the heritage of architectural achievement. Their difference from other buildings, older or contemporary, will not matter. Their affinity to other great buildings of all periods will matter a great deal.

Paul Bonatz, who died on 20 December 1956, was far too little known in this country, although he was an honorary corresponding member of the R.I.B.A. Perhaps the reason for this is that his 'modernism' was undemonstrative.

Paul Bonatz was no fanatic. He had no patent for a new architecture and never broke with tradition. All the same, he has probably carried out more original work in an unmistakably 20th-century spirit than many of those who are generally regarded as the *avant garde* of the modern movement in architecture. He also had an immense influence, not only on his students in Stuttgart and Ankara, but on many other younger architects who saw in him a master who could combine the use of new techniques and old crafts in an entirely unmannered and natural way. His autobahn-bridges are contemporary, whether they are carried out in steel, reinforced concrete or masonry. His functional structures for the Neckar-canalisation, carried out in concrete, blend in with the old city and castle of Heidelberg as if they had always been there. He was a sensitive detailer and a superb draughtsman.

He possessed both exuberant imagination and an impeturbable common sense. The latter made him a severe critic of his own work. He did not hesitate to admit in his autobiography his subsequent shame at having succumbed to a fashionable (and short-lived) trend in the German architecture of the 'twenties when he built the administrative offices of a large steel combine.

This lapse will be forgotten, but his railway station in Stuttgart, his opera house in Ankara, his museum in Basle, his beautiful bridges, and many other of his buildings will, as long as they stand, delight those who do not wear blinkers and can combine working for the future with a respect for the past.

Yours faithfully,

FREDERICK F. CURTIS [*A*]

NOT ORIGINAL

DEAR SIR,—Whenever I visit an exhibition of Modern Architecture, or whenever I see it illustrated in the JOURNAL, I realise that quite a large amount of such work is not original.

So much of it seems to me to infringe the copyright of the man who designed the first, back yard, chicken house.

Yours truly,

G. N. KENT [Retd. *A*]

JOURNAL COVERS

DEAR SIR,—It is refreshing to hear a lone voice raised in protest against the illustration on your October cover of a 'monstrosity'. I refer to Mr. Garlick's letter in your January issue.

On the assumption that one man will protest for every hundred, or it may be every thousand, who grumble, we can be sure that the number who are dissatisfied (to put it mildly) at modern trends in architecture is considerable.

Nobody should expect the great number of new building types made necessary by present-day requirements to be executed in Gothic or Classic styles; but it is surely right to assume that there is an alternative to the egg-crate type of engineering structure that is spawning with such incredible rapidity all over the countryside, and intruding with such disastrous results into many old-world towns. At one time elevational design took precedence over convenient planning. Now the reverse is the case. It is time we struck a medium.

Architecture is nothing if not artistic. For thousands of years buildings of all kinds, and in a great variety of styles, have been, generally speaking, pleasing to look upon; but the vast majority of modern buildings are gaunt, soulless and frightening in their impersonal barbarity.

It is not impossible to design a large building to human scale. The builders of classical temple and Gothic cathedral achieved it, gloriously. The designers of some of the atomic power stations show a masterful handling of massive structures which yet retain grace and dignity.

Where is the man who can set a lead to the humanising of other buildings—or must this Age go down in history as one of vulgar mechanisation of town and country to match the standardised products of the machine age and to suit the declining tastes of a Welfare State?

Yours faithfully,

E. GERALD W. EDWARDS [*A*]

'BUILDING TECHNIQUE'

DEAR SIR,—In your kind review of this book I think it might have been fair to mention that any material revision of this third edition is due (and stated to be due) to Mr. J. Brandon-Jones. 'Modern', in the earlier editions, was not my choice of title, but that of the publisher; I would have chosen as preferable the word 'Minor', but am satisfied that the new title fully represents the nature of the technique described.

I am not, and never shall be, a 'Modernist'—old dogs can't learn new tricks—and don't want to.

Yours faithfully,

EDWIN GUNN [Retd. *A*]

Private Balconies in Flats

INSPECTION OF THE PLANS of modern flats and maisonettes, or the buildings themselves, will show that a balcony of some sort is considered to be desirable, and no doubt the first thought that springs to the mind of the average person is that the balconies will enable the tenants to get a breath of fresh air, a desire that is innate in the British character; but with a view of finding out what tenants really think about balconies the Development and Management Sub-committee of the London County Council's Housing Committee recently asked the Director of Housing to report on the subject so far as it affected L.C.C. estates. Accordingly Miss Margaret Willis, of the L.C.C. Architect's Department, made a survey among 258 tenants in various parts of London, and the main points of her survey are summarised below.

The use made of balconies is for drying of washing, sitting, children's play, putting out the pram, growing plants, and general use such as storing a mangle, fuel or pram, shaking mats, or as a means of letting extra air into the room through the balcony door. Considerable use is made of the balconies for drying clothes, usually on clothes horses or on lines slung below the level of the balustrade, the point being the appearance of washing, especially where the balconies face a main road or where tenants regard washing hung out on the balcony as 'slummy'.

About 40 per cent of the tenants interviewed make frequent use of the balconies for sitting out in nice weather, but about 20 per cent never sit out, and the size of the balconies appears to be an important factor but not the only one, as the degree of privacy expected by the tenants has a bearing, hence a recessed balcony with a solid front is more popular with those desiring privacy, which is less obtainable in a projecting balcony. Sources of intrusion on privacy are; flats directly opposite or at right angles with balcony access, nearness to neighbours and people passing in a near-by street. Aspect and prospect also affect the use made of balconies.

Older children prefer to play outdoors where they can meet their friends, but those under 5 years make occasional use of balconies for play, especially (from the mother's point of view) if there is some sort of wire mesh front so that the children can see down without climbing up, and toys are less likely to be dropped through than would be the case if there were railings.

Where the living-room and kitchen both open on to the balcony the kitchen entry is preferred. A balcony recessed into the living-room, making it L-shaped, is disliked because of inconvenience in carpeting and placing furniture; many tenants would sacrifice the balcony and have more space in the room. Balconies less than 3 ft. 6 in. deep are criticised and preference is for those running the length of the living-room windows as this gives better access for cleaning the glass.

Review of Construction and Materials

This section gives technical and general information. The following bodies deal with specialised branches of research and will willingly answer inquiries.

The Director, The Building Research Station, Garston, near Watford, Herts.
Telephone: Garston 4040.

The Officer-in-charge, The Building Research Station Scottish Laboratory, Thorntonhall, near Glasgow.
Telephone: Busby 1171.

The Director, The Forest Products Research Laboratory, Princes Risborough, Bucks.
Telephone: Princes Risborough 101.

*The Director, The British Standards Institution, 2 Park Street, London, W.*1.
Telephone: Mayfair 9000.

*The Director, The Building Centre, 26 Store Street, Tottenham Court Road, London, W.C.*1.
Telephone: Museum 5400 (10 *lines*).

*The Director, The Scottish Building Centre, 425–7 Sauchiehall Street, Glasgow, C.*2.
Telephone: Douglas 0372.

National Building Studies

Special Report No. 24, **A Note on the History of Reinforced Concrete in Buildings.** Those who have time and inclination to delve into the history of building materials will read with interest this Special Report. If asked when reinforced concrete was first used most persons would no doubt hazard a guess and mention the latter half of the last century, and they would not be far wrong, as the report states that 'In the late eighteen-forties, several interesting experiments were made in the use of cement concrete. In 1848 J. L. Lambot built, of concrete reinforced with a rectangular mesh of iron rods, a rowing boat which evoked considerable interest at the *Exposition Universelle* in Paris in 1855.' The Report then traces the development of reinforced concrete and includes photographs of relevant buildings.

Special Report No. 25, **The Durability of Reinforced Concrete in Buildings.** Special Reports are 'Surveys of available knowledge on particular subjects written for industry', and No. 25 gives the findings of a survey made in 1954 by Dr. S. B. Hamilton of the Building Research Station, and Mr. A. G. Bray [Retd. *F*] of the Cement and Concrete Association, who selected upwards of 50 buildings for inspection, some of them over 50 years old. The buildings included offices and warehouses, granaries, factories and buildings subject to chemical attack. Under the heading 'Common defects found in reinforced concrete work', information is given on faulty design, inappropriate materials, faults in construction, severe exposure, and diagnosis of trouble. Two other sections deal with repairs of defects and recommendations for future work, so that reasonable immunity from early decay may be ensured.

The Report states that 'It is a matter well worthy of consideration whether the adequate supervision of important concrete work does not require the services of a separate and independent inspectorate. . . . It would be the concrete inspector's duty to report whether the concrete that went into the job was in every way up to specification, whether test cubes and other specimens taken for test faithfully accorded with the work they purported to test, and what action was taken on the result of site tests. He would neither have, nor need, executive authority.' He would thus relieve the busy contractor's foreman and the Clerk of Works of the need to give to the concrete the close and continuous attention it requires.

The price of each of these two Special Reports, obtainable from H.M.S.O., is 3*s.* 6*d.* net.

Fire Precautions in New Houses. The Department of Health for Scotland has issued a 'Memorandum on Structural Fire Precautions for Houses,' published by H.M.S.O., Edinburgh, at 3s. net. The Introduction states that in the course of inspecting building sites the officers of the Department noticed that many of the requirements of the new bye-laws were not being met, particularly those relating to the fire resistance of the structure. The Department feels that this may be due to the difficulty that technical men have in understanding the legal phraseology of the model bye-laws and therefore it is hoped that the Memorandum, written in straightforward terms and illustrated by clear drawings, will be of assistance not only to local authority technical officers but also to architects in private practice and to private builders. It indicates certain ways of meeting the structural fire precautions of the model building bye-laws as they apply to houses other than those in blocks exceeding five storeys or fifty feet in height.

The notes have been prepared by the Department in consultation with the Building Research Station; they cover the main elements of the structure and indicate the fire resistance and other properties that each element must have. The notes apply mainly to methods of construction making use of traditional materials, including the method of slender wall construction described in a previous Memorandum.

The Memorandum does not cover every one of the structural fire precautions to be observed in houses, the principal omissions being the bye-law requirements for external walls and openings therein, and requirements for flue pipes, nor does it profess to give an authoritative interpretation of the provisions of the bye-laws, and in cases of doubt reference should be made to the bye-laws in force in the locality.

Peglers' Specifications. Anything that will reduce the labour of writing specifications is to be commended, with the proviso, of course, that clarity and definiteness are not thereby lessened. With this thought in their minds Messrs. Peglers Ltd. have produced a booklet which they call *Peglers' Manual of Group Specifications*, and they state that the object of the manual 'is to save your time by greatly reducing the detail work involved in plumbing specifications'.

The method evolved by Messrs. Peglers is to group under a single number all the fittings for a particular unit; thus, for example, instead of specifying fittings for a sink by writing '1 pair ½ in. CP.EC bibtaps (B.S.1010), H & C., 1 2 in. × 3⅜ in. flange CP skeleton sink waste with plug and 4 in. centre screw; 1 17 in. CP oval link chain', all that is necessary is to write 'Peglers sink set No. BS5'. This system not only saves time but ensures that all the fittings in a group are similar in design.

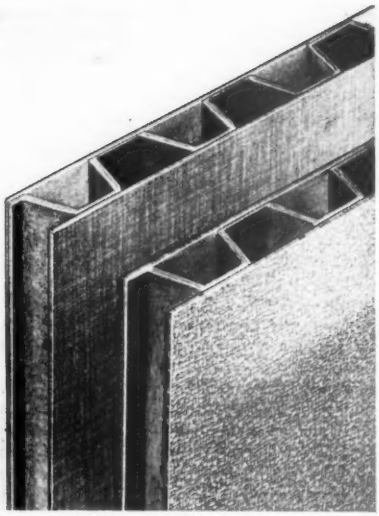
The manual includes illustrations of various taps and fittings, fully described and giving the Peglers reference number, and price. Copies of the manual are available, free of charge, from the company at Belmont Works, Doncaster; London Office, Prestex House, Marshalsea Road, S.E.1.

Laminated Timber Structures. The advantages of timber in general, and of laminated timber structures in particular, have been much publicised, both in building exhibitions and the technical Press, and now Messrs. Kingston (Architectural Craftsmen) Ltd. have issued a folder containing sheets for filing, illustrated with photographs of laminated timber arches and particulars of them, indicating the service which can be given by the laminated timber structures division of the company. Other relevant documents are also included in the folder.

The address of the company is Minster Works, Hull.

Mastic Asphalt Tanking. The Natural Asphalte Mine-owners and Manufacturers Council have issued a new edition of their booklet on damp-proof coursing and tanking to basements, illustrated with clear sectional drawings. The introductory notes mention the usual precautions that should be taken to prevent the asphalt being injured by dumping reinforcing rods or other material on it before the covering concrete screed is laid, but two points that might easily be overlooked are mentioned on the drawing depicting asphalt tanking with block-bonded wall construction; they are: (1) that the sharp arrises of the bricks supporting the vertical asphalt should be chamfered at top and bottom of the projecting bands of the block bonding, in order to maintain the full thickness of the asphalt at external angles, and (2) that in building the brickwork against the vertical tanking the bottom arrises should be chamfered where they rest on the projecting ledges of the asphalted block bonding, so that the bricks may rest solidly on the asphalt fillets at the internal angles.

The address of the Council is 94–98 Petty France, Westminster, London, S.W.1.



The new Holoplast '75' panel. The nearer panel is surfaced with Oriental, and the farther one with Textile Decorplast

A New Holoplast Panel. Messrs. Holoplast Ltd. announce the introduction of a new form of their structural panel, to be known as the Holoplast '75' because in cross-section the approximate angle of its web is 75 degrees, thus differing from the present panel in which the webbing is at right-angles to the faces and for this reason will in future be known as the Holoplast '90'.

Although the two panels look much alike there is a difference in their structure, the '90' being of an integral laminated plastic construction, whereas the new '75' has hardboard facings joined by a strong angular corrugation of resin-treated Weathertex fibreboard. Both types are available in six stove-enamelled finishes and 44 melamine-surfaced Decorplast colour/pattern combinations as well as applied veneers. The standard overall thickness of both the '75' and the '90' panels is $1\frac{5}{8}$ in., the length being 8 ft. and the width 4 ft. The interstices may be filled with suitable acoustic materials. The company state that on comparable jobs the average price of the new '75' panel is about 25 per cent less than the '90'.

The address of Messrs. Holoplast Ltd. is 116 Victoria Street, London, S.W.1.

Plastic House Building. We have heard of various techniques aiming at quick building, such as complete wall units coming on the site ready for erection, concrete buildings cast over inflated balloon cores, and of course the pumping of concrete through flexible pipes, but the latest idea comes from America. Mr. Henry H. Reichhold, of the U.S.A., is president of Reichhold Chemicals, Inc., and he is a producer of plastics. It occurred to him that if moulds for a house were erected on the site a helicopter could come and hover overhead while it poured plastic material through a hose into the moulds. The material would be plastic resins pre-mixed with reinforcing agents such as glass fibres, wood pulp and the like.

It is reported that Mr. Reichhold's company has already developed the technical 'know-how' and that engineers are working at their drawing boards on the idea. It is admitted that the use of helicopters would be expensive, but set against that would be the saving in time and labour because of the faster delivery of the raw materials, and the larger the project the greater the saving. There are several points about this suggestion that, to use diplomatic language, require clarification; meanwhile we should keep ourselves plastically receptive of this airy idea, in case it literally comes down to earth.

D.S.I.R. Publications. The Department of Scientific and Industrial Research has published Sectional List No. 3, giving a list of the Department's publications revised to October 1956 but containing only those publications issued by H.M.S.O. or the Department which are still in print or in the press. As an aid to purchasers most of the publications listed have been graded and marked with a bold **A, B** or **C**. Those marked **A** are suitable for an intelligent reader who has no previous knowledge of the subject, **B** for a senior student or practitioner of the subject, and **C** for research workers and specialists in the subject. Prices are given.

Ministry of Works Advisory Leaflet No. 39. **Cements other than ordinary Portland Cement.** This useful leaflet gives a short description of twelve brands of cement; rapid hardening Portland, extra rapid hardening, water-repellent Portland, waterproof Portland, sulphate-resisting, low-heat Portland, Portland blast furnace, white, coloured, super-sulphated, high-alumina, and masonry cement. One table lists needs of the job, suitable types of cement, trade names of typical brands, and remarks. A second table gives setting times and comparative strengths of ordinary Portland and some special cements, but only those for which a British Standard exists are included in this table.

The leaflet can be obtained from H.M.S.O., or from booksellers. Single copies 4*d.* each; quantity rates for bulk supply.

Anti-static Rubber Flooring. Reports of accidents happening in the operating theatres of hospitals add point to the need for an anti-static flooring material that will render harmless the dangerous electro-static charges that may be encountered in such places. Anti-static rubber flooring is a meritorious material for the purpose, but for technical reasons it has hitherto been confined to black or dark colours.

Now, however, the Silvertown Rubber Company announce that they have overcome the technical difficulties and can supply the flooring in an extensive range of colours, of thicknesses $\frac{3}{16}$ in., $\frac{1}{4}$ in. and $\frac{3}{8}$ in., and complying with B.S. 2050: 1953. The address of the company is Herga House, Vincent Square, London, S.W.1.

Building Centre Monthly Lists. It may not be generally known that the Building Centre publishes a monthly list of new materials and appliances that have come on the market during the previous month. Each list gives a very brief description of the new products and mentions the sources from which full details can be obtained.

The Building Centre will gladly supply a copy of these lists, free, to architectural practices, but as the supply is somewhat limited it is requested that application should be made only by those who can make full use of the lists. They are edited by Mr. R. Nott of the Building Centre.

A New Sadia Water Heater. Messrs. Aidas Electric Ltd., of Sadia Works, Rowdell Road, Northolt, Middlesex, announce the introduction of a new single-point electric storage water heater to be known as the Sadia Two Plus, because its capacity is nearly $2\frac{1}{4}$ gallons, actually 10 litres. Its introduction is due to the realisation of the need of an intermediate size of over-the-sink storage heater, somewhat larger than the $1\frac{1}{2}$-gallon model and therefore perhaps more suitable for the average kitchen.

The thermostatically controlled element is loaded to 1,000 watts, giving a full recovery rate of just under an hour for a full charge of water. The heater can be had in cream or white stove-enamelled finish with a choice of coloured bands and chromium-plated fittings. The tap is of a new design with a nylon washer and black moulded handle. The price is £16 3s. 0d., including £5 3s. 0d. purchase tax.

British Standards Recently Published. B.S. 1467: 1957. **Dimensions of Folders and Files for Correspondence Filing.** Because of differences in manufacturing methods this revised Standard provides for foolscap folders in lengths ranging from $13\frac{3}{4}$ in. to $14\frac{3}{8}$ in., and any user to whom this difference is of importance should state his requirements at the time of ordering. Users of folders are invited to notify the B.S.I. of any preference they may have for a particular size in this range of lengths. Such preferences will be recorded by the Institution so that a recommended preferred length may be considered when next the Standard is revised. Price 2*s.* 6*d.*

B.S. 1703: 1957. **Refuse Chutes for Multi-storey Buildings.** This revised Standard specifies requirements for refuse chutes which are in the form of one or two vertical pipes for receiving domestic refuse from successive floors in a building and depositing it into storage containers housed in a chamber at the lower end; bulk removal taking place at intervals.

The revision provides for the use of two chutes discharging into the same chamber, and includes certain additional design points; the aim being to present the general characteristics of the principal types of chutes that have proved to be the most convenient and hygienic in use; thus a substantial part of the Standard is in the nature of an interim Code of Practice, with illustrations of typical sections of refuse chutes and recommended minimum dimensions. The specification deals with chutes, hoppers, container chambers and removable containers. Price 3*s.* R.I.B.A. representative, Mrs. P. A. U. Adamson [*A*].

Practice Notes

Edited by Charles Woodward[*A*]

MINISTRY OF HOUSING AND LOCAL GOVERNMENT. Selected Appeal Decisions. Bulletin No. XII of Appeal Decisions has now been issued by the Ministry and is obtainable at H.M. Stationery Office, price 1*s.* 4*d.* net.

These bulletins give a guide to the Minister's views in considering appeals from the local planning authority's decisions. This bulletin includes appeals in respect of caravan sites and the erection of houses in an area without a public service.

Temporary Houses offered for sale to local authorities. Temporary houses, of which 124,000 were provided in England and Wales in the early post-war years, are being offered to the local authorities concerned at £150 each. At present local authorities make an annual payment to the Government for the houses. The Ministry of Housing and Local Government's circular says that though they may vary in quality, the houses generally are still in good condition and should remain on their present sites unless there is good reason for removing them. With reasonable care and attention most of them can continue to provide very useful accommodation for a good many years, particularly for small families, and for old people wanting a small and easily-run place where they can look after themselves.

Local authorities are also invited to buy temporary houses which become redundant and have to be removed from their present sites, and the Ministry of Works will offer them at prices based on current contracts.

Before temporary houses are re-erected, whether by private persons or by housing authorities, planning permission will be required. Bye-law permission will also be required. The circular says that applications for permission must, of course, be examined by the local planning authorities on their merits, but, provided that care is taken in grouping and layout, it is anticipated that many sites could be found where there need be no objection to the houses. (12 February 1957.) (Circular 9/57.)

DIRECTOR OF CONTRACTS, MINISTRY OF WORKS. Mr. G. V. Strudwick, C.B.E., Director of Contracts, Ministry of Works, retired on 14 February 1957. He is succeeded by Mr. A. R. Plowman, who was Deputy Director of Contracts.

Safer Fires in the Home. A reminder of the importance of providing fixtures to hold fireguards in position has been sent to local authorities by the Minister of Housing and Local Government.

There are indications that so far few local authorities have installed the fixtures in their council houses, yet surveys have shown that at least 50 per cent of burning accidents in the home are caused by unprotected fires. Many local authorities appear to have taken the view that the wide variety of fireguards make it impracticable to provide fixtures. However, the British Standards Institution have recently produced a specification for fireguards, incorporating fixing hooks, for open fires, so that the difficulty can now be overcome (2788: 1956). The cost of providing a suitable fixture in the wall or fire surround is small, and the Ministry understand that various models and sizes of fireguards which comply with the new specification are becoming available.

In view of the appalling consequences, in pain, disfigurement and death, that can result from lack of adequate precautions, the Minister feels sure that councils will think it right to take prompt and effective action. He suggests that councils should ask staff visiting tenants to bring the danger to their notice, and to advise them on fireguards. If councils decide to sell fireguards to their tenants the Minister will be prepared to give any necessary approval. New council houses should have a proper fireguard in the first place.

New electric, oil and gas heaters are now sold with guards, but many existing older appliances do not have them fitted. The Minister is sure that Gas and Electricity Boards and contracting firms will do their best to supply suitable guards, and local authorities are asked to do what they can to help. (26 February 1957.)

BUILDING SAFETY: Employers Launch Campaign. In a speech made by Mr. Leonard Walden, of Henley, President of the National Federation of Building Trades Employers, at a meeting of the Council of the London Master Builders' Association on 14 February, he said:—

'We enter 1957 faced with many problems, including those arising from the credit squeeze and the shortage of petrol and fuel oils. I feel strongly, however—and I speak both as President of the Federation and as Chairman of its Building Regulations and Welfare Committee—that we must give first priority to the waging of an all-out campaign aimed at reducing the number of accidents in our industry.

'Accident prevention is a matter largely within our own control and I hope that never again will it be possible for the Chief Factory Inspector, in his annual report, to be able to say—as he has said with considerable justification—that in this matter of danger to life and limb the building industry as a whole is not facing up to its responsibilities.

'The National Federation will shortly be issuing further guidance to its Regional Safety Committees, but in the meantime I commend to them the example set by the L.M.B.A. in arranging to hold at the beginning of May a conference on accident prevention, which will be open to all London building firms.

'We must convince all our members that a reduction in the number of accidents depends, to a large extent, upon the degree to which each of them, recognising that he has a moral as well as a legal responsibility, is willing to accept personal responsibility for taking the initiative and is prepared to devote as much attention to making each job safe as to any other aspect of its organisation.'

REGIONAL HOSPITAL BOARDS' WORKS ORGANISATIONS. Professional and Technical Staffs. The Whitley Councils for the Health Services have issued a Circular (P.T.B. 66) which sets out new definitions for some grades for regional architects and deputy regional architects who must be Registered Architects, having passed the requisite examinations.

The salary scales are set out for the different groups of regional architects, deputy regional architects and the assistant grades, with additions in respect of London.

The qualifications of architectural assistants are: having passed the Intermediate Examination of the R.I.B.A., or an examination giving exemption. Conditions of service and periods of annual leave are included in the Circular. The Circular operates as from 1 March 1957 and is issued by the Whitley Councils for the Health Services, 14 Russell Square, London, W.C.1.

PLANNING PERMISSIONS. Design of a Dwelling-house. In a recent appeal to the Minister against the local planning authority's refusal to grant permission for the erection of a bungalow, the Minister dismissed the appeal. The grounds upon which planning permission were refused were that the erection of the building of the design submitted, adjacent to dwellings of a traditional design, would be out of keeping with the appearance of the area and would injure its amenities. The planning authority had asked for the views of the Architects' Advisory Panel and they had made recommendations to improve the design.

The Minister observed that the quality of a particular architectural design must be a matter of personal opinion and, in general, that the choice and wishes of an individual developer should not be rejected unless it can be shown that it would be incongruous or seriously out of keeping with the locality in which it is to be placed. Equally, it must be recognised that the advent of new material, building techniques and economic bounds will lead to the design of buildings which must of necessity out-step existing conventions. Nevertheless, there will be a minority of instances where, apart from taste, the simple issue of good neighbourliness must be taken into account. The appellant's design had been considered by an impartial panel of practising architects who had expressed the view that the design was out of keeping with the neighbourhood, and their views were also taken by a substantial number of local residents whose views cannot lightly be disregarded.

The Minister decided, in dismissing the appeal, that he did not feel it right that he should define a particular design or precise elevation for any building to be placed on a site, but he was satisfied that the reasons given by the planning authority for the

rejection of the design submitted were correct and should be supported.

LAW CASES

City of London Real Property Co. Ltd. v. War Damage Commission. This case was referred to in the JOURNAL for August 1956 at page 429, when the Court had held that two new buildings erected on a site which, prior to the war damage, consisted of a number of small sites and had been amalgamated into one site, could not fairly be described as still the same property as before the war damage, though altered or added to, and was a wholly different property. The War Damage Commission had determined that a cost of works payment could not be made and the Property Company's appeal from this determination was dismissed.

The Property Company appealed to the Court of Appeal and on 29 January the Court dismissed the appeal and refused leave to appeal to the House of Lords. (THE ESTATES GAZETTE, 9 February 1957.)

South London and Streatham Estates Ltd. v. Large. Interpretation of repairing covenant in a lease. This case concerned a claim by the owners of premises against the lessee under the repairing covenant of a lease dated 1873 which expired in 1954. The repairing covenant in the lease was as follows:—

'And will at the end of this demise peacefully and quietly leave surrender and yield the said messuages, buildings and premises so well and substantially repaired, upheld, supported, maintained, mended, glazed, painted, papered, white-washed, emptied, cleansed, cultivated and kept as aforesaid, together with all additions and improvements thereto, and all grates, stoves, chimney pieces, hearths and other matters and things (not being tenant's fixtures) which at any time during the last 10 years of the term shall be fixed on the premises, in good order and condition, reasonable use and wear thereto in the meantime only excepted.'

The owners of the premises contended that the latter part of the covenant had no application to the premises themselves but was only applicable to the condition relating to the additions specified, such as grates and stoves, not being tenant's fixtures.

The lessee, whilst acknowledging the obligation during the whole period of the term to maintain the property, submitted that 'reasonable use and wear only excepted' governed the condition of the whole property on expiration of the interest.

The Court held that the provision as to the condition of the premises on handing over is determined by the provisions pertaining during the tenancy, so far as they determine the question of repair. If on surrender the state of the property shows that the lessee could not have complied with the requirements of the covenant, that leaves a breach of obligation to yield up the property in the condition required by the lease. The provision as to the exception of reasonable use and wear relates only to fixtures and fittings.

Judgment was entered for the owners with costs. (THE ESTATES GAZETTE, 23 February 1957.)

Book Reviews

From the Ground Up. By *Lewis Mumford.* 7¼ in. viii + 243 pp. New York: Harcourt, Brace & Co. 1956. 10*s.* 6*d.*

A selection of some fairly recent peals of thunder from the Sky Line architectural department of the NEW YORKER. It includes that splendid series on the problems of traffic and urban congestion called 'The Roaring Traffic's Boom', and for this alone the book is worth while. Nearly all of it however is good Mumford and therefore majestic journalism. Some of the things he says may be doubted—but, goodness, how he can say them! I never know which to admire most—the bland irony, the pulverising emphasis, the unfailing urbanity, or the inexhaustible vocabulary which never gets out of control. J. C. P.

Ancient Monuments open to the public. 8½ in. 128 pp. + 9 pls. Country Life. 1956. 7*s.* 6*d.*

A companion volume to the annual Country Life book which gives particulars of country houses open to the public. Both are most useful.

Principles and Practice of Planning, Compulsory Purchase and Rating Law, by *M. R. R. Davies.* 10 in. xliv + 293 + 28 pp. Butterworth and Co. 1956. 40*s.*

This book contains a comprehensive account of the principles and practice of the law relating to the three subjects indicated in the title. It also deals with the practice and procedure of the Lands Tribunal.

As stated in the preface, the book is essentially a statement of the law as it is, but it may be useful as a guide to those whose practice requires a knowledge of the subjects dealt with. It is an exhaustive treatise expounding the law up to 14 December 1955. The inclusion of cases of appeal against the decision of local planning authorities and the Minister's decision are useful as a guide in considering whether or not such appeals should be made. There does not appear to be any reference to section 1 of the 1951 Town Planning Amendment Act, which seems to qualify Class XI of the General Development Order of 1950.

The author states that the writing of the book is really an account of the tremendous legal powers vested in modern public authorities, and a startling revelation of the relative importance of the Judiciary in holding an effective balance between the powers of the State on the one hand and the rights and duties of ordinary members of the general public on the other. Ordinary members of the general public who are also members of a profession dealing with planning and other connected matters have cause to agree wholeheartedly with the author's conclusions. C. W.

I.U.A. Notes

I.U.A. Ordinary Assembly. There will be a meeting in Paris of the Ordinary Assembly of the I.U.A., probably at the end of August. According to the Statutes of the International Union the Assembly, which is largely a business meeting, has to meet every two years. The last meeting was at The Hague in 1955. Normally meetings coincide with congresses of I.U.A., but owing to the posponement of the 1957 Congress at Moscow until 1958, the Assembly will meet this year as a separate occasion.

International Labour Office. The I.U.A. has been entered on the special list of non-governmental organisations drawn up by the I.L.O.

PEMBROKE WICKS, C.B.E., LL.B. [*Hon. A*]

An appreciation

Whilst full justice has been paid elsewhere to Pembroke Wicks' brilliant career in secretarial and Cabinet offices prior to his appointment as Registrar to the Architects' Registration Council, it is only in retrospect that a true measure can be made of the invaluable services which he rendered for the past twenty years in this capacity and which were so suddenly terminated by his death.

To this responsible position he brought not only his wide experience of men and affairs but a judicial mind and sound judgment.

The Act had been in operation but a short time before Wicks became Registrar and its impact on a profession, in some measure hostile to any form of regimentation, demanded from its new official precisely those qualities of vision, tact and tolerance which he possessed and gave in full measure.

Though the Registration ship, especially in its early days, encountered some gales and heavy seas, the members of Council and Committees on board were able to feel with confidence that their imperturbable and unobtrusive skipper kept his steady hand on the wheel.

It may therefore with truth be said that the smooth working of the Act in operation during recent years is attributable to the wise guidance exercised by Wicks in the many activities of the Council which in turn has inspired the confidence of the whole profession.

As a man, his charm of manner and his quiet sense of humour made Pembroke Wicks a delightful companion, and those who had the privilege of his friendship will ever retain a fragrant memory of one whose outstanding characteristic throughout a long and brilliant career was his integrity.

SYDNEY TATCHELL [*F*]

Notes and Notices

NOTICES

Seventh General Meeting, Tuesday 9 April 1957 at 6 p.m. The Seventh General Meeting of the Session 1956–57 will be held on Tuesday 9 April 1957 at 6 p.m. for the following purposes:—

To read the Minutes of the Sixth General Meeting held on 5 March 1957.

To present the Royal Gold Medal for 1957 to Mr. Alvar Aalto (Hon. Corresponding Member, Finland).

(Light refreshments will be provided before the meeting.)

Session 1956–1957. Minutes V. At a Special General Meeting held on Tuesday 5 February 1957 at 6 p.m., Mr. Kenneth M. B. Cross, M.A., President, in the Chair.

The Minutes of the Special General Meeting held on Tuesday 8 January 1957 were taken as read, confirmed and signed as correct.

The President stated that this Special General Meeting had been called for the purpose of confirming the Resolution passed at the Special General Meeting held on Tuesday 8 January 1957 concerning the Leases of Nos. 66 and 68 Portland Place.

Professor Basil Spence, O.B.E., A.R.A., A.R.S.A., the Hon. Secretary, moved the following Resolution:

"THAT the Resolution in respect of the Leases of Nos. 66 and 68 Portland Place duly carried at the Special General Meeting held on the 8th day of January 1957 BE AND IS HEREBY CONFIRMED."

Mr. Thomas E. Scott, C.B.E., Vice-President, seconded the Resolution.

The President then put the Resolution to the meeting and it was carried.

The proceedings closed at 6.11 p.m.

Session 1956–1957. Minutes VI. At the Fourth General Meeting of the Session 1956–1957 held on Tuesday 5 February 1957 at the conclusion of the Special General Meeting on that day.

Mr. Kenneth M. B. Cross, M.A., President, in the Chair.

The meeting was attended by about 450 members and guests.

The Minutes of the Third General Meeting held on Tuesday 8 January 1957 were taken as read, confirmed and signed as correct.

The President delivered his address to architectural students and Sir Hugh Casson, M.A., R.D.I. [*F*], read his review of the work submitted for the Prizes and Studentships, 1957.

On the motion of Dr. A. S. M. Symons, B.Sc., A.R.C.S., D.I.C., F.Inst.P., Principal of the Northern Polytechnic, seconded by Mr. R. E. Enthoven [*F*], Chairman of the Board of Architectural Education, a vote of thanks was passed to the President and Sir Hugh Casson by acclamation, and was briefly responded to by them.

The presentation of prizes was then made by the President in accordance with the Council's award.

The proceedings closed at 7.56 p.m.

Session 1956–1957. Minutes VII. At the Fifth General Meeting of the Session, held on Tuesday 19 February 1957 at 6 p.m., Mr. Kenneth M. B. Cross, M.A., President, in the Chair.

The meeting was attended by about 250 members and guests.

The Minutes of the Fourth General Meeting, held on Tuesday 5 February 1957, were taken as read, confirmed and signed as correct.

The following members attending for the first time since their election were formally admitted by the President: *As Fellows*—F. N. Astbury, H. Brashier; *as Associates*—J. W. Ager-Harris, J. E. Anstis, D. A. Arch, J. G. H. D. Cairns, D. C. Catt, R. F. Clark, Geoffrey Favell, E. G. Francklow, P. A. Kennedy, R. Luker, D. W. Owen, G. S. Palejowski, D. A. Pettit, P. P. Phillips, R. N. Sutcliffe, M. J. K. Szarowicz, S. C. Walker, R. J. C. Warr, G. C. Weatherly, P. R. Whitbourn.

Dr. Nikolaus Pevsner, C.B.E., M.A., F.S.A. [*Hon. A*], having read a paper on 'Architecture and William Morris', a discussion ensued and on the motion of Sir Frederic Osborn, Chairman of the Town and Country Planning Association, seconded by Mr. A. Llewellyn Smith, M.B.E., M.A. [*F*], a vote of thanks was passed to Dr. Pevsner by acclamation and was briefly responded to.

The proceedings closed at 7.30 p.m.

British Architects' Conference, Oxford, 10–13 July 1957. A cordial invitation is extended to all members and Students of the R.I.B.A., the Architectural Association and the Allied Societies to attend the Conference to be held at Oxford from 10 to 13 July. Full details of the programme and the application form are enclosed with this issue of the JOURNAL. Application forms should be completed and sent to the Secretary, R.I.B.A., as soon as possible but in any case *not later than* 21 *June*.

Members are again reminded that hotel reservations should be made before 1 May, as after this date the hotels cannot undertake to keep rooms unless definitely booked.

Associates and the Fellowship. Associates who are eligible and desirous of transferring to the Fellowship are reminded that as from 1 January 1956 all candidates for the Fellowship will be required to submit to the Fellowship Examiners drawings and photographs or examples of work. Candidates may also be required to attend for an interview, which may however be dispensed with at the discretion of the Fellowship Examiners. The necessary nomination forms may be obtained from the Secretary, R.I.B.A.

Licentiates and the Fellowship. By a resolution of the Council passed on 4 April 1938 all candidates whose work is approved are required to sit for the Examination, which is the design portion of the Special Final Examination, and no candidate will be exempted from the Examination.

Note.—The above resolution does not affect Licentiates of over 60 years of age applying under Section IV, Clause 4 (*c*) (ii) of the Supplemental Charter of 1925.

Members and Professional Affixes. The Council's attention has been called more than once to the practice among some members of adding a string of letters of doubtful value to the affix indicating membership of the Royal Institute on their letter paper.

This is a matter in which the Council obviously cannot dictate to members, and must trust to their good sense. It should be obvious, however, that the affix of a chartered body of high standing is weakened in effect by the addition to it of a string of other mysterious designations, some of which probably indicate no more than the payment of an annual subscription.

Shapes and Sizes of Technical Literature. Postcards for use by members asking manufacturers to produce technical literature in accordance with B.S. 1311: 1955 are available from the Secretary, R.I.B.A., on application.

Luncheon and Tea Facilities for Members. Members are reminded that there is a self-service dining room on the second floor of the R.I.B.A. building where luncheons are served between 12 noon and 2 p.m. on weekdays except Saturdays. The dining room is open to members and Students. There is a 'Club' licence and drinks can therefore be obtained with meals. Members may bring guests.

Morning coffee and afternoon teas have hitherto been served in the Members' Room on the first floor. Owing to the rebuilding programme the Members' Room has to be taken over for temporary office use and the service of coffee and teas will, during the period of rebuilding, be available on the second floor landing.

COMPETITIONS

Northern Ireland War Memorial Building. Last day for submitting designs, 30 March 1957.

Proposed Municipal Offices and Civic Hall, Carlisle. Last day for submitting designs in the Final Stage, 1 July 1957.

New Technical College Buildings, Paisley, Scotland. Last day for submitting designs, noon on 27 March 1957.

International Competition, Geneva. Last day for the despatch of entries, 6 p.m., 15 April 1957.

Full particulars of the above competitions were published in the JOURNAL for December 1956, pp. 78 and 79.

COMPETITION RESULT

International Competition for a New National Opera House at Bennelong Point, Sydney, Australia. The names of the competitors whose designs were premiated were published in the JOURNAL for February 1957, p. 160.

HIGHLY COMMENDED: Messrs. L. P. Kollar and B. A. Korab (Australia).

COMMENDED: Mr. Laurence Prynn [*A*]; Messrs. S. W. Milburn and Partners [*FF*]; Mr. H. D. Krall [*A*]; Professor Walter Hamer (Germany); Mr. John F. Metcalfe [*A*]; Mr. George Subiotto [*A*]; Messrs. Plenderleath and Clark [*AA*]; Messrs. H. Seidler, A. G. H. Young [*A*], R. M. Parker [*A*], R. G. Fitzhardinge [*A*], and R. M. Young (Australia); Messrs. Robert A. Dunster and Peter S. Staughton; Herr Otto Leitner (Germany); Messrs. David A. W. Brunton, B. H. Joyce, Brian Mildren and John T. Lilly (Australia); Messrs. Derek A. Cobb [*A*] (Britain) and Wilhelm Holzbauer (Austria); Messrs. Terence Bliss and Michael Le Pelley [*AA*].

ALLIED SOCIETIES

Edinburgh Architectural Association. The most recent event in the syllabus was an address on Le Corbusier's church at Ronchamp, given by Professor Basil Spence (Hon. Secretary, R.I.B.A.); it was followed by an interesting discussion.

The Council, meeting as a Centenary Committee, has been preparing the syllabus for the centenary celebrations, which it is hoped will reflect the importance of the occasion, add interest to the R.I.A.S. convention, and long be remembered by all the Edinburgh members. Details will be announced later, but as one

contribution to the celebrations it is proposed to publish, in the next issue of PROSPECT, a humorous and partly architectural guide to Edinburgh. It is also proposed to hold an exhibition of members' work, including examples typical of the past hundred years as well as present-day and students' work.

The annual dance of the Association was held on 19 October in Professor Robert Matthews' new terminal building at Turnhouse. The President and Secretary of the Incorporation were present and some 300 members and guests attended the function. Proceedings on Members' Nights included a debate on the motion that 'The Art of Architecture is Bunk', which was defeated by 19 votes to 7. Mr. Graham Law [*A*] proposed the motion and Mr. J. Dunbar-Nasmith [*A*] opposed it. Mr. J. E. D. Sanderson [*A*] was in the chair. Another occasion was a talk on 'The Use of Moving Forms in Multi-storey Buildings', given by Mr. J. Eddison and Mr. Walter Scott [*A*], Mr. Thomas Spaven [*A*] being in the chair. Slides and a film illustrated the talk.

The Glasgow Institute of Architects

The annual dinner and dance of the Glasgow Institute of Architects was held in the Central Hotel, Glasgow, on 12 February. The President, Mr. Thomas S. Cordiner [*F*] was in the Chair. Four hundred and sixty members and guests were present, among them Mr. Kenneth M. B. Cross, President, R.I.B.A., Mr. William McCrea, President, R.I.A.S., the Lord Dean of Guild, Mr. W. H. Marr, Mr. J. W. Train, Convener of the Trades of Glasgow, and Mr. W. R. F. Ellis, Deputy Secretary, R.I.B.A.

Leicestershire and Rutland Society of Architects. Biennial Dinner. The Biennial Dinner of the Leicestershire and Rutland Society of Architects was held on Thursday 21 February at the Grand Hotel, Leicester, and was attended by 91 members and guests. The President, Mr. J. H. Lloyd Owen [*A*], was in the chair and among the guests were the Lord Lieutenant of Leicestershire, the Lord Mayor of Leicester, the Bishop of Leicester, and Mrs. R. R. Williams. Mr. L. C. Howitt [V.P., R.I.B.A.] represented the President, R.I.B.A.

The toast of the City and County of Leicester was proposed by Mr. T. A. Collins and the Lord Mayor and the Lord Lieutenant responded. Mr. J. H. Lloyd Owen proposed the toast of the R.I.B.A. and its Allied Societies and Mr. L. C. Howitt replied. The toast of the guests was proposed by Mr. F. W. James and Lt.-Col. C. E. J. Freer, President of the Leicester Law Society, replied.

Northern Architectural Association

The annual dinner of the Northern Architectural Association was held on 14 February at the Royal Station Hotel, Newcastle upon Tyne, the President of the N.A.A., Mr. Donald McIntyre [*F*], was in the Chair.

Among the guests were Mr. Kenneth Cross, President, R.I.B.A., The Rt. Rev. Maurice Harland, Lord Bishop of Durham, Mr. N. H. Fowler [*F*], President, West Yorkshire Society of Architects, Mr. Arthur Robinson, President of the Northern Counties Regional Federation of Building Trades Employers, Councillor J. R. Bartlett, Deputy Mayor of Newcastle upon Tyne, and Mr. C. D. Spragg, Secretary, R.I.B.A.

The toast of 'The Municipal Authorities of the Provinces' was proposed by Mr. Donald McIntyre and responded to by Councillor Bartlett; the toast of the R.I.B.A. was proposed by the Bishop of Durham and responded to by the President, R.I.B.A.; 'The Guests' was proposed by Mr. G. Talbot Brown [*F*]. V.P., N.A.A., to which Col. R. Mould Graham, Chairman of the Northumberland Society of Chartered Accountants, responded.

Northamptonshire, Bedfordshire and Huntingdon Association of Architects. R.I.B.A. Architecture Bronze Medal. The R.I.B.A. will award a Bronze Medal for a building of outstanding merit completed in the Association's province during the period 1 January 1954 to 31 December 1956.

Members other than members of the Association who have done work in the area during the period and who wish to put their buildings forward for consideration should write for conditions to the Hon. Secretary, J. T. B. Neville [*L*], 35 Rowan Avenue, Boothville, Moulton, Northampton.

The closing date for the receipt of nominations will be 1 May 1957.

West Yorkshire Society of Architects. The R.I.B.A. will award a Bronze Medal for a building of outstanding merit completed in the Society's province during the five years ended on 31 December 1956.

Members other than members of the Society who have done work in the area during the period who wish to put their buildings forward for consideration should write for conditions to the Hon. Secretary, R. S. Shapley [*F*], 11a Cavendish Road, Leeds, 1.

GENERAL NOTES

Using a Library. A lecture will be given at the Central School of Arts and Crafts, Southampton Row, London, W.C.1, at 3 p.m., on 15 April 1957, by Miss Denise Bonnett, LL.B., editor of the FURNITURE RECORD and recently editor of the book CONTEMPORARY CABINET DESIGN AND CONSTRUCTION. Miss Bonnett's subject will be '*A technical journalist uses a library's facilities*'. The chair will be taken by Mr. B. Agard Evans, M.Sc., Chief Librarian of the Ministry of Works.

Aluminium. The R. S. Reynolds Memorial Award.

A notice of this annual international award for architects conducted by the American Institute of Architects appeared in the January JOURNAL.

The A.I.A. has announced the names of the five members of the jury. The American members are: Mr. George B. Cummings, P.A.I.A., Mr. Percival Goodman, F.A.I.A., Professor Ludwig Mies van der Rohe, F.A.I.A., and Mr. Edgar Williams, F.A.I.A. Mr. Willem Dudok of Hilversum represents architects in countries other than America.

This year's award of $25,000 will be made during the Centennial Convention of the American Institute of Architects at Washington, 14–17 May.

European Congress on Ground Movement. This Congress is sponsored by the University of Leeds and the National Coal Board and is supported by the Royal Institution of Chartered Surveyors and the Institution of Mining Engineers. The object of the Congress is to provide an opportunity for interchange of information and for free discussion by investigators and others specially interested in ground movement due to mining.

The Congress will be held at the University of Leeds from 9 April to 12 April 1957, but enrolment will take place on the afternoon of 8 April.

Those interested should communicate with the Hon. Secretary, Mr. K. Wardell, 9 King's Arcade Chambers, St. Sepulchre Gate, Doncaster.

L.C.C. Sculpture Exhibition. During the coming summer the London County Council will hold its fourth exhibition of sculpture in its parks; this year in Holland Park, Kensington. These exhibitions have now been established as regular triennial events. The theme of this year's exhibition will be the contrast between British sculpture of the mid-19th and 20th centuries, and Her Majesty the Queen has lent representative pieces of the earlier period from the Royal Collection at Buckingham Palace and Windsor Castle.

The exhibits have been selected with the advice of Mr. Charles Wheeler, C.B.E., President of the Royal Academy, and other eminent sculptors and experts.

The exhibition will be open daily from the end of May until September.

Conference on the Delivery and Storage of Solid Fuel in Flats. The proportion of flats in modern housing developments has called attention to the problems of the delivery and storage of solid fuel in these dwellings, and during 1956 a study of these problems was made by a joint committee appointed by the London Regional Committee of the Coal Utilisation Council and the London Branch of the Institute of Housing, assisted by observer members from various interested bodies. A report was issued, dealing with trends in flat construction, coal trade practice in the delivery of fuel, access to flats, stairs, passageways and lifts, and questions of storage, with recommendations.

A conference will be held at the Institution of Civil Engineers, Great George Street, London, S.W.1, at 2.30 p.m. on Thursday 9 May 1957 to discuss the findings of the report and to make recommendations for action. The Chairman will be Mr. L. Locket, and the principal speakers will be Mr. Norman M. Carr, Mr. Clifford E. Culpin [*F*] and Mr. H. C. Hampton, F.R.I.C.S. Those wishing to attend should communicate with the Coal Utilisation Council, 3 Upper Belgrave Street, London, S.W.1.

Obituaries

Robert Frederick Bargman [*F*], past Chairman of the Guildford District Chapter of the South Eastern Society of Architects, died on 22 October 1956, aged 72.

Mr. Bargman trained in his father's office and joined the practice in 1920. His works included a factory at Acton for Messrs. Landis & Gyr, general housing in Dorking and district, and agricultural and estate work in Surrey and Sussex.

Mr. Bargman served with the Royal Engineers in the First World War, being demobilised with the rank of Captain.

Arthur Clayton [*F*] died on 15 October 1956, aged 76.

Mr. Clayton was the son of a builder and contractor of Macclesfield and received his early training in his father's drawing office. He

later entered the employment of the Calico Printers' Association Ltd., Manchester, where he was architect and surveyor for 20 years. He served in the R.N.V.R. in the First World War. After the war he began private practice in Manchester and Macclesfield. Among his works were additions and alterations for the Hollins Mill Co., housing estates at Bollington and Llandulas, North Wales, and premises for Messrs. Cartwright & Sheldon Ltd. and Messrs. Frost Bros., Macclesfield. His last work was the design of the Hollin Lane Church, erected two years ago at a cost of approximately £11,000.

Miss Rosette Mary Edmunds [*A*], died on 22 April 1956, aged 56.

Miss Edmunds qualified at the University of Sydney and began practice in about 1923. Her work included houses, schools and churches with Clement Glancey; secret constructions for the Royal Australian Navy in the Second World War; planning surveys for a number of towns in Australia for the Department of Post-War Reconstruction; and work on the plan for Sydney.

Miss Edmunds was one of the first women members of the Royal Australian Institute of Architects to be elevated to the Fellowship. She served for many years on the Board of Architectural Education of the R.A.I.A. and her book *Architecture, an Introductory Survey*, published in 1938, was used as a textbook in Sydney University and in the schools of New South Wales. She was also the author of a number of articles on architecture and town planning—including one entitled 'Planning for the Atomic Age' in the Australian quarterly review TWENTIETH CENTURY.

She was one of the leaders in the formation of the Canberra Area Committee of the R.A.I.A., its first Secretary, and its President at the time of her death.

Herbert Lambert Geeson [*F*], past President East Africa Institute of Architects, died in Nairobi on 28 December 1956, aged 77.

Mr. Geeson went to East Africa in the early part of 1914 to join his friend G. M. Giles, with whom he had worked in the office of a London firm of architects. He served in the army throughout the East African campaign, in which he was awarded the Meritorious Service Medal and was mentioned in despatches. After the cessation of hostilities he began practice on his own account in Nairobi, where he worked until his death.

Mr. Geeson carried out many commercial and domestic buildings during the inter-war years, including extensive additions to the Duke of Gloucester School in Nairobi, in which his design was placed first in competition. He was a consistent competitor in architectural competitions and shortly before his death was awarded the first premium in the competition for the King George VI Memorial in Mombasa. He was one of the earliest members of the East Africa Institute of Architects.

William John Green [*L*] died on 23 October 1956, aged 75.

Mr. Green served his articles and practised in Birmingham, being latterly the senior partner in the firm of William J. Green and Associates.

In the early years of his career Mr. Green was concerned mainly with domestic architecture and cinemas; from 1922 onwards he specialised in work for the motor industry and public buildings. Among these later works were the Castle Bromwich Aero factory, their West Works for Morris Commercial Cars, Unitas House, and a canteen, sports pavilion and recreation ground for Messrs. Palethorpe's Ltd.

William Reginald Hand [*L*] died on 4 November 1956, aged 57.

Mr. Hand was for thirty years architect to Godstone R.D.C., Surrey.

Alexander Stewart McGregor [*L*] died on 23 September 1956, aged 80.

Mr. McGregor served his articles with Messrs. Burnet & Boston, of Glasgow, and entered the employment of the Greenock Electricity Department in 1912, remaining there until 1928. Here he worked on the design of large extensions to the power station. He then went to Renfrewshire Education Authority as architectural assistant, where he was responsible for the planning and erection of St. John's New School, Port Glasgow, and extensions at Greenock Academy. When the function of the Education Authority was transferred to the County Council Mr. McGregor's appointment was terminated and he then set up in private practice in Greenock. During this period—from 1940 onwards—he carried out mostly small private work and designed a large number of public houses, but also designed large extensions for Messrs. Hastie's engineering works and a new frontage and offices for West Renfrew Motors Ltd. In 1940 he gave up private practice and took an appointment with the Admiralty, first in Greenock then in Rosyth Dockyard, and in 1950 returned to Messrs. Frank Burnet & Boston, where he was employed up to the time of his death.

Walter Stirrup[*F*], first President of the Preston, Blackburn and District Society of Architects, died on 10 April 1956, aged 92.

Mr. Stirrup practised in Blackburn and was responsible for Blackburn fire station, a large Co-operative stores, and schools, shops, houses and industrial works.

Edgar Allan Davey Tanner [*F*] died on 3 July 1956, aged 63.

Mr. Tanner studied at the Architectural Association School of Architecture and practised at Grosvenor Place, London, until 1938. Mr. Tanner designed a number of flats and shops in Stepney, motor showrooms in the West End of London, and an office for the Wiltshire Conservative Benefit Society (won in competition in conjunction with Mr. J. Lander).

Mr. Tanner was a past member of Council.

Richard John Vernall, O.B.E., V.R.D. [*A*], died on 4 July 1956, aged 55.

Mr. Vernall, after serving his articles with Messrs. Waller, diocesan architects, Gloucester, went out to Hong Kong in government service. Among other works he was responsible for the Queen's Road market there. He served in the armed forces during the Second World War, being awarded the O.B.E. and being mentioned in Despatches. He was for some time a prisoner of war. In 1950 he went to the Gold Coast as Assistant Director, Public Works.

In 1953 he was invalided out of government service and underwent a major operation which robbed him of his larynx and his voice. In spite of this disability he started a private practice in Bromyard, Herefordshire, and was building it up successfully when death overtook him.

Francis Walter Bagnall Yorke, F.S.A. [*F*], died on 28 January, aged 77.

Mr. Yorke was for a long time in partnership with Mr. H. M. Barker. After the dissolution of this partnership the firm of Yorke, Harper & Harvey was founded.

Mr. Frederick Gibberd [*F*] writes:

'It seems inadequate and inappropriate to just catalogue the professional achievements of F. W. B. Yorke; he was such a splendid and endearing man. His death was no slow decline into graceful old age; but rather the abrupt termination of a vigorous, creative personality. It is true that last autumn he did not take so many trout out of the Derbyshire Test as his son, F. R. S. Yorke, but he attributed this to inferior tackle rather than a failing skill. He fished with zest and everything else he did, he did with zest—and how many things they were! Fragments of our last conversation come back: the biography he was writing with John Betjeman on Bidlake, a new ice house he had discovered (a subject he was an authority on), the design of a new pub, the iniquity of the County Council in giving a school in his district to a rival architect, the inferiority of London practice as against provincial, and a host of other things: and all with such kindliness, such humour, such personal charm that you could not but be attracted to him.

'He began practice in 1908 in Birmingham and at various times had branch offices in Redditch, Stratford-on-Avon and Henley-in-Arden. It was in Warwickshire and Worcestershire that he did the majority of his work. There, over the long years, he built or restored many inns, farms and country houses; buildings that are a pleasure to look at and a pleasure to be in.

'It was characteristic of him that he had a client for life: many years ago he built the head office of the National Farmers' Union at Stratford-on-Avon and his work is still being carried out there; it was the same story with the industrial buildings of Herbert Terry at Redditch, the restorations at Shottery Manor, and other large works.

'If he was a specialist at all, restoration work was his subject: certainly he gave a great deal of his time to it and certainly he was admirably qualified. He had a sense of history, a feeling for the character of a place and an understanding of brick, stone and wood and the ways they could be worked and assembled. He was surveyor to Holy Trinity Church, Stratford-on-Avon, and restored the Guild Chapel there; he worked on the churches of Wootton Wawen, Henley-in-Arden and Aston Cantlow; and such large country houses as Coughton Court near Alcester, Packwood House, Ragley Hall and Seabournes at Much Fawley.

'He published a book, "The Planning and Equipment of Public Houses 1949", and as a Fellow of the Society of Antiquaries he made studies of such subjects as the history of the building craft and the Georgian doorways of Edgbaston.

'F. W. B. Yorke was a man who enjoyed living; he sketched, he designed, he built, he wrote, he loved his fellow-men and they loved him.'

Arthur W. Whydale [*L*]. **Correction.** In the obituary notice of the late Arthur W. Whydale [*L*] in the December JOURNAL, alterations to Barnwell Manor, Kettering General Hospital and Housing at Corby were included with his architectural works.

We understand that Mr. Whydale was engaged by Messrs. Gotch, Saunders and Surridge at the time and that the work was done under the direction of the partners in this firm.

Membership Lists

ELECTION: 5 MARCH 1957

The following candidates for membership were elected on 5 March 1957.

AS FELLOWS (2)

Howie: Francis Morrison, Dip.Arch.(Abdn.) [*A* 1947], Singapore, Malaya.
Mills: David Butler, O.B.E. [*A* 1938], Nairobi, Kenya.

AS ASSOCIATES (4)

Adams: Lieut.-Col. Clarence Bavin, M.B.E., Salisbury, S. Rhodesia.
Glaister: Ronald McLagan, D.A.(Glas.), Toronto, Ontario, Canada.
Leach: Eric, Mosman Park, Western Australia.
Trundle: Miss Ailsa Merle, Melbourne, Victoria, Australia.

ELECTION: 9 APRIL 1957

An election of candidates for membership will take place on 9 April 1957. The names and addresses of the candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Monday 1 April 1957.

The names following the applicant's address are those of his proposers.

AS HON. FELLOW (1)

Wheeler: Charles, C.B.E., P.R.A., Garden Studio, 22, Cathcart Road, S.W.10. Proposed by the Council.

AS HON. CORRESPONDING MEMBER (1)

Chatelain: Leon, Jr. President of the American Institute of Architects, 1632 K Street N.W., Washington, D.C., U.S.A. Proposed by the Council.

AS FELLOWS (7)

Drewitt: Geoffrey Bernard, T.D., Croix de Guerre, A.A.Dipl. [*A* 1937], Messrs. Cowell, Drewitt and Wheatley, Lloyds Bank Chambers, Penzance; 5, Clarence Place, Penzance. A. J. Thomas, F. G. Drewitt, A. G. Bazeley.

Fisher: Carl, Dip.Arch.(The Polytechnic) [*A* 1947], 56, Portland Place, W.1; 2, Campden House Close, Kensington, W.8. E. C. Scherrer, J. K. Hicks, Peter Moro.

Wills: Clifford Gordon [*A* 1941], Messrs. F. J. Wills & Son, 199, Piccadilly, W.1; 3, Ventnor Drive, Totteridge, Herts. Sir Howard Robertson, F. L. Preston, Sir Thomas Bennett.

and the following Licentiates who have passed the qualifying examination:—

Akerman: Reginald Ernest, United Dairies Ltd., 34, Palace Court, W.2; 18, Sandhurst Avenue, Tolworth, Surrey. F. T. Dear, M. H. Thomas, W. F. Granger.

Erdi: Louis, 27, Knightrider Street, E.C.4; 3, Crescent Wood Road, S.E.26. Peter Moro, A. W. Kenyon, M. R. Hofler.

Van-Nuffelen: Alphonse Albert, Messrs. Stone, Toms and Partners, 28, South Audley Street, W.1; 3, Golden Yard, Hampstead, N.W.3. J. K. G. Sarjeant, George Whitby, Frank Scarlett.

and the following Licentiate who is qualified under Section IV, Clause 4 (*c*) (ii) of the Supplemental Charter of 1925:—

Pride: Frank, M.C., Messrs. Walker & Pride, Mercat House, St. Andrews, Fife. A. D. Haxton, John Needham, A. F. S. Wright.

AS ASSOCIATES (53)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

Aspinall: Kaye Sharpley, Dipl.Arch.(Leeds) (Leeds Sch. of Arch.) The Hare and Hounds Hotel, Menston, nr. Leeds. F. Chippindale, N. H. Fowler, W. H. King.

Boddington: David, Dip.Arch.(Leics.) (Leicester Coll. of Art and Tech.; Sch. of Arch.) The Manor Cottage, Newton Harcourt, nr. Great Glen, Leics. H. G. Goddard, S. Penn Smith, G. A. Cope.

Bolton: Thomas, B.A.(Manchester) (Victoria Univ. Manchester: Sch. of Arch.) 76, Knowsley Road, St. Helens, Lancs. Prof. R. A. Cordingley, H. T. Seward, E. S. Benson.

Brown: Philip Tyson, B.Arch.(Dunelm) (King's Coll. (Univ. of Durham) Newcastle upon Tyne, Sch. of Arch.) 6, Edinburgh Road, Primrose, Jarrow, Co. Durham. Prof. W. B. Edwards, F. Fielden, J. H. Napper.

Brown: Roger Glendenning, B.A.(Arch.)(Manchester) (Victoria Univ. Manchester: Sch. of Arch.) 108, Stanborough Green, Welwyn Garden City, Herts. Prof. R. A. Cordingley, Dr. W. A. Singleton, J. K. Robertson.

Burchett: Peter Anthony (Sch. of Tech. Art and Commerce, Oxford: Sch. of Arch.) Stangate, Dunstall Lane, St. Marys Bay, Romney Marsh, Kent. Reginald Cave, F. C. Haslam, F. T. Pritchard.

Bush: Peter Lawrence, Dip.Arch.(Sheffield) (Univ. of Sheffield: Dept. of Arch.) 19A, Moor Oaks Road, Broomhill, Sheffield, 10. Prof. Stephen Welsh, H. B. Leighton, J. L. Womersley.

Cattell: Keith, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.) 1, Little Birches, Birches Barn Estate, Wolverhampton. A. Douglas Jones, T. M. Ashford, Herbert Jackson.

Combe: John Reginald, (Special Final), 12, Fordbridge Road, Sunbury - on - Thames, Middlesex. P. Morrey, Arthur Korn, Dr. R. Herz.

Cottam: John Raymond, B.A.(Arch.)(Sheffield) (Univ. of Sheffield: Dept. of Arch.) 302, Edmund Road, Sheffield, 2. Prof. Stephen Welsh, Robert Cawkwell, J. W. Davidson.

Coulton: Alan, Dipl.Arch.(Leeds) (Leeds Sch. of Arch.) 2, Cavendish Drive, Eldwick, nr. Bingley, Yorks. F. Chippindale, D. A. Fowler, Kenneth Turner.

Crux: Michael Roderick, (Final), Helios House, Barham, nr. Canterbury, Kent. Applying for nomination by the Council under Bye-law 3(*d*).

Davidson: James, Dip.Arch.(Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.) 'Rockcliffe,' Mill Street, Rutherglen, Lanarkshire. E. F. Davies, Ninian Johnston, J. L. Gleave.

Delaney: James A., B.Arch.(N.U.I. Dublin) (Univ. Coll. Dublin, Ireland: Sch. of Arch.) 228, Griffith Avenue, Whitehall, Dublin, Ireland. W. A. Maguire and the President and Secretary of the Royal Institute of the Architects of Ireland under Bye-law 3(*a*).

Evans: Edwin John, D.I.P.T.P. (Lond.), A.M.T.P.I. [*L*], (Special Final), 58, Ashbourne Avenue, South Woodford, E.18. C. G. Stillman, J. T. W. Peat, J. L. Womersley.

Fairfoot: George Desmond, B.A.(Arch.)(Lond.) (Bartlett Sch. of Arch.: Univ. of London) 18 Lyndhurst Road, Hampstead, N.W.3. Prof. H. O. Corfiato, R. C. White-Cooper, Thomas Ritchie.

Farrant: David John, B.A.(Arch.)(Lond.) (Bartlett Sch. of Arch.: Univ. of London) 8, Shelley Court, Parkleys, Ham Common, Richmond, Surrey. Prof. H. O. Corfiato, R. C. White-Cooper, Thomas Ritchie.

Foote: John Anthony, Dip.Arch.(Sheffield) (Univ. of Sheffield: Dept. of Arch.) 3, Alma Villas, Pennycomequick, Plymouth. Prof. Stephen Welsh, H. B. Leighton, Louis de Soissons.

Foster: David, Dip.Arch.(Sheffield) (Univ. of Sheffield: Dept. of Arch.) 173, Meadowhall Road, Sheffield, 9. Prof. Stephen Welsh, H. B. Leighton, H. B. S. Gibbs.

Fraser: Neil Bertram Mackenzie, Dip.Arch.(Abdn.) (Aberdeen Sch. of Arch.: Robert Gordon's Tech. Coll.) c/o Brown, 87, Pikeman Road, Glasgow, W.3. E. F. Davies, John Maclennan, A. G. Henderson.

George: Stephen, M.C., B.Arch.(L'pool) (Liverpool Sch. of Arch: Univ. of Liverpool) Deputy City Architect, 10, Loseby Lane, Leicester. Prof. Sir William Holford, Prof. Basil Spence, F. B. Pooley.

Gomme: Norman John, Dipl.Arch.(Oxford) (Sch. of Tech. Art and Commerce, Oxford Sch. of Arch.) 'Holmleigh', 163, Penn Road, Hazelmere, Bucks. K. A. Stevens, R. F. Dodd, Reginald Cave.

Heath: Cecil Richard, Dip.Arch.(Leics.) (Leicester Coll. of Art and Tech. Sch. of Arch.) 40, Draycott Place, Chelsea, S.W.3. G. H. Hawkins, Cyril Mardall, F. R. S. Yorke.

Hodgkinson: Brian Morris, B.A.(Arch.)(Lond.) (Bartlett Sch. of Arch.: Univ. of London) 60, Westcombe Park Road, Blackheath, S.E.3. Prof. H. O. Corfiato, R. C. White-Cooper, P. V. Mauger.

Hope: John Carruthers, D.A.(Glas.) (Glasgow Sch. of Arch.) 59, Wallamhill Road, Lochar briggs, Dumfries. Prof. W. J. Smith, G. W. Robertson, W. A. P. Jack.

Humphreys: John Robert Bellamy, (Final), 24, Victoria Park Avenue, Lea, nr. Preston, Lancs. G. N. Hill, G. S. Pester, John Watt.

Jones: Donald John William, (Final), Delfryn, Rhosmaen, Llandilo, Carmarthenshire. C. G. Tagholm, O. S. Portsmouth, H. A. Ellis.

Jones: Peter Dimmock, Dipl.Arch.(Northern Polytechnic) (Northern Poly. London: Dept. of Arch.) 5, Ashdon Road, Harlesden, N.W.10. K. W. Farms, Mrs. M. F. Farms, H. Kenchington.

Kilby: Peter William Thomas, Dip.Arch.(Manchester) (Victoria Univ. Manchester: Sch. of Arch.) Flat 2, 224, Bramhall Lane, Davenport, Stockport. H. T. Seward, Dr. W. A. Singleton, Prof. Clifford Holliday.

Kirby: David Charles, Dip.Arch.(Manchester) (Victoria Univ. Manchester: Sch. of Arch.) 2, First Avenue, Wrea Green, nr. Preston, Lancs. Prof. R. A. Cordingley, E. S. Benson, Dr. W. A. Singleton.

Laird: Douglas Philip Jarvie, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.) 10, Beresford Gardens, Edinburgh, 5. Prof. Basil Spence, Prof. R. H. Matthew, Esmé Gordon.

Law: Peter Haworth, B.A. (Arch.) (Manchester) (Victoria Univ. Manchester: Sch. of Arch.) 16, Parker's Road, Broomhill, Sheffield, 10. Prof. R. A. Cordingley, Dr. W. A. Singleton, E. S. Benson.

Lewis: James, Dip.Arch.(Manchester) (Victoria Univ. Manchester: Sch. of Arch.) 11A, Denbigh

Road, W.11. J. E. Beardshaw, Dr. W. A. Singleton, Prof. Clifford Holliday.

Macdonald: Peter Gillies, D.A.(Edin.) (Edinburgh Coll. of Art: Sch. of Arch.) Mor Monadh, Stornoway, Isle of Lewis, Scotland. Applying for nomination by the Council under Bye-law 3 (*d*).

McGahan: Amos Ronald Fairlie, A.M.I.C.E., (Special Final), 29, Nightingale Lane, S.W.12. Thomas Ritchie, R. C. White-Cooper, Prof. H. O. Corfiato.

Miller: Robert Leslie, Dip.Arch.(Sheffield) (Univ. of Sheffield: Dept. of Arch.) 8, Meadway, Heswall, Wirral, Cheshire. Prof. Stephen Welsh, H. B. Leighton, M. G. Gilling.

Milner: William Stephenson, (Final), 7, Bridge Street, Driffield, E. Yorks. Alexander Potter, J. Konrad, W. G. Wilson.

Nichols: Charles William, Dip.Arch.(Sheffield) (Univ. of Sheffield: Dept. of Arch.) The Old Mill House, Warwick New Road, Leamington Spa. Prof. Stephen Welsh, Arthur Ling, H. B. Leighton.

Parkinson: Arthur William, (Special Final), 19, Clifton Street, Blackpool. F. L. Lumb, C. H. MacKeith, H. T. Jackson.

Phillips: John Francis, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.) 178, Hall Green Road, West Bromwich, Staffs. A. Douglas Jones, Herbert Jackson, G. A. G. Miller.

Pollock: Graeme Egerton, (Passed a qualifying Exam. approved by the R.A.I.A.) 24, Beauly Way, Rise Park, Romford, Essex. K. C. Duncan, E. L. B. Henderson, O. V. Chisholm.

Renshaw: Robert Malcolm, Dip.Arch.(Nottm.) (Nottingham Sch. of Arch.) 31, Eakring Road, Mansfield, Notts. J. G. Woollatt, T. N. Cartwright, J. W. M. Dudding.

Rubbra: Colin David, B.A.(Arch.)(Manchester) (Victoria Univ. Manchester: Sch. of Arch.) 100, Belper Road, Derby. Prof. R. A. Cordingley, Dr. W. A. Singleton, E. S. Benson.

Sim: John Gregory, A.S.T.C.(Arch.) (Passed a qualifying Exam. approved by the R.A.I.A.) c/o Bank of N.S.W., 47, Berkeley Square, W.1. J. C. Fowell, J. L. S. Mansfield, P. J. Gordon.

Spencer: (Mrs.) Patricia Mary, (Final), Flat 72, The Green, Fitton Hill, Oldham. Cecil Stewart, Gerald Sanville, F. L. Halliday.

Sykes: John Michael Clifford, Dipl.Arch. (Leeds) (Leeds Sch. of Arch.) 5, Oakwood Park, Leeds, 8. N. H. Fowler, W. H. King, Noel Pyman.

Taylor: Derek John, B.Arch.(Dunelm) (King's Coll. (Univ. of Durham) Newcastle upon Tyne: Sch. of Arch.) 11, Bainford Avenue, Denton Burn, Newcastle upon Tyne. Prof. W. B. Edwards, Bruce Allsopp, F. Fielden.

Telford: Alastair John, Dip.Arch.(Birm.) (Birmingham Sch. of Arch.) 52, Argyll Road, Kensington, W.8. A. Douglas Jones, T. M. Ashford, John Holman.

Tinker: Louis James, Dipl.Arch.(Leeds) (Leeds Sch. of Arch.) c/o Regent Inn, Kirkgate, Leeds, 2. H. Jackman, Kenneth Turner, D. A. Fowler.

Usher: (Miss) Rosemary, Dip.Arch.(Manchester) (Victoria Univ. Manchester: Sch. of Arch.) 19, Oak Drive, Fallowfield, Manchester, 14. L. C. Howitt, Prof. R. A. Cordingley, W. Usher.

Watson: David McGregor, (Final), 5, Harefield Avenue, Dundee. John Needham, A. F. S. Wright, H. M. Smail.

Wilson: Derrick, Dip.Arch.(Sheffield) (Univ. of Sheffield: Dept. of Arch.) 3A, East Lane, Stainforth, nr. Doncaster, Yorks. Prof. Stephen Welsh, H. B. Leighton, H. A. Johnson.

Wood: Roger, B.A.(Arch.) (Sheffield) (Univ. of Sheffield: Dept. of Arch.) 73, Nursery Road, North Anston, nr. Sheffield. Prof. Stephen Welsh, H. B. Leighton, H. B. S. Gibbs.

ELECTION 18 JUNE 1957

An election of candidates for membership will take place on 18 June 1957. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Friday 14 June 1957.

The names following the applicant's address are those of his proposers.

AS FELLOW (1)

Greenblo: Ezra, B.A.(Arch.) (C.T.) [*A* 1944] 601, Permanent Buildings, 8, Darling Street, Cape Town, S. Africa; 'El Patio', Windermere Road, Muizenberg, Cape Town. Prof. L. W. T. White, O. Pryce Lewis, R. F. R. Day.

AS ASSOCIATES (26)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

Amberkar: Prabhakar Anant, (Final), Taraporewala Building No. 2; 2nd Floor, Cumballa Hill, Bombay 26, India. M. K. Jadhav, S. J. Narwekar, C. M. Master.

Baxendale: Eric, (Special Final), Public Works Department, Singapore, Malaya. K. A. Brundle, H. L. Bloomfield, T. H. H. Hancock.

Beinart: Julian, B.Arch. (C.T.), M.Arch. (Mass. Inst. Tech.) (Passed a qualifying Exam. approved by the I.S.A.A.) c/o School of Design, North Carolina State College, Raleigh, North Carolina, U.S.A. O. Pryce Lewis, Prof. L. W. T. White, F. L. Sturrock.

Bhojraj: Manohar Ganesh, (Final), 140/A, Rash Behari Avenue, Calcutta 29, India. M. K. Jadhav, S. H. Parelkar, S. J. Narwekar.

Datta: Krishan Lal, (Final), 128, Lachman Chowk, Dehra Dun (U.P.), India. J. P. J. Bilimoria, R. L. Gehlote, J. R. Talpade.

Flanders: John Frederick, Dipl.Arch.(Northern Polytechnic) (Northern Poly. London: Dept. of Arch.) Apt. 2, 31, Helendale Avenue, Toronto 12, Ontario, Canada. T. E. Scott, S. F. Burley, C. G. Bath.

Gibson: Robert Findlay, Dip.Arch.(Queensland) (Passed a qualifying Exam. approved by the R.A.I.A.) Messrs. Thynne & Associates, 289, Queen Street, Brisbane, Queensland, Australia. F. G. Costello, Sir Hugh Casson, J. W. A. Cubitt.

Grimpel: Leonard Ronald, (Passed a qualifying Exam. approved by the R.A.I.A.) 32, Shirley Road, Roseville, N.S.W., Australia. S. G. Thorp, W. R. Laurie, P. J. Gordon.

Gumaste: Chandrakant Keshav, (Final), 4/19, Khandke Building, N.C. Kelkar Road, Dadar, Bombay 28, India. S. H. Parelkar, H. N. Dallas, M. K. Jadhav.

Howes: Charles Herbert Duncan, (Passed a qualifying Exam. approved by the I.S.A.A.) 75, Hotchkiss House, Gardiner Street, Durban, S. Africa. A. M. Allen and applying for nomination by the Council under Bye-law 3 (*d*).

Hurlin: (Miss) Shona Elizabeth, B.Arch.(Rand) (Passed a qualifying Exam. approved by the I.S.A.A.) 37, Lobelia Road, Primrose Hill, Germiston, Transvaal, S. Africa. Applying for nomination by the Council under Bye-law 3 (*d*).

Jones: William Wilford, (Final), P.O. Box 559, Kampala, Uganda. Benjamin Waterhouse, Prof. G. W. Pollard, H. T. Dyer.

Lim: Chong Keat, B.A.(Arch.) (Manchester) (Victoria Univ. Manchester: Sch. of Arch.) c/o The Commonwealth Fund, 1, East 75th Street, New York 21, N.Y., U.S.A. Prof. R. A. Cordingley, Dr. Thomas Howarth, Dr. W. A. Singleton.

Lobo: Austin Malcolm, (Final), c/o Chief Engineer's Office, Architects' Section, P.W.D., B. and R. Branch, Lucknow, (U.P.) India. Prof. S. S. Reuben, S. H. Parelkar, H. N. Dallas.

Potterton: John Edward, B.Arch.(C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.) 318, Tanganyika House, Third Street, Salisbury, S. Rhodesia. Prof. L. W. T. White, O. Pryce Lewis, Francis Lorne.

Reid: Hugh McGregor, (Special Final), Housing and Planning Department, Georgetown, British Guiana. R. F. Reekie, G. A. Crockett, Mrs. L. M. Reekie.

Rey: J. Gustave, Dipl.Arch.(Oxford) (Sch. of Tech., Art and Commerce, Oxford: Sch. of Arch.) 64, Lees Street, Curepipe, Mauritius. Reginald Cave, David Beecher, F. T. Pritchard.

Reynolds: Marius Lawrence, B.Arch.(C.T.) (Passed a qualifying Exam. approved by the I.S.A.A.) 405, Sanlam Building, Worcester, S. Africa. Prof. L. W. T. White, O. Pryce Lewis, F. L. Sturrock.

Sambhare: Gotoo Dwarkanath, (Final), c/o Messrs. Abdulla Peermahomed & Co., 22, Apollo Street, Fort, Bombay 1, India. S. H. Parelkar, H. N. Dallas, M. K. Jadhav.

Savvides: Nicos Georgiou, (Special Final), P.O. Box 321, Nicosia, Cyprus. Applying for nomination by the Council under Bye-law 3 (*d*).

Smith: Terence Walsh, (Passed a qualifying Exam. approved by the I.S.A.A.), Silver Gulls, Glencairn, Simonstown, Cape, S. Africa. Prof. L. W. T. White and applying for nomination by the Council under Bye-law 3 (*d*).

Toye: Laxman Govindrao, (Final), Deputy Director (Designs) National Buildings Organisation, Ministry of Works, Housing and Supply, 11A, Janpath, New Delhi, India. J. P. J. Bilimoria, J. R. Talpade, N. B. Shroff.

Van Schaik: Johannes Josephus Arnoldus, Dip. Arch.(Rand) (Passed a qualifying Exam. approved by the I.S.A.A.) 705, J.B.S. Building, Bureau Lane, Pretoria, S. Africa. R. C. Abbott, V. S. Rees-Poole, W. A. Macdonald.

Veale: Vernon Leslie, (Passed a qualifying Exam. approved by the I.S.A.A.), c/o Messrs. Stucke, Harrison, Ritchie and Watson, P.O. Box 2271, Johannesburg, S. Africa. Applying for nomination by the Council under Bye-law 3 (*d*).

Welland: John Middleton, B.A.(Arch.)(Lond.) (Bartlett Sch. of Arch.: Univ. of London) c/o Messrs. Nickson and Borys, 14–16, Porto Novo Market Street, Lagos, Nigeria. Prof. H. O. Corfiato, R. C. White-Cooper, Thomas Ritchie.

Williams: Evan Osborne, B.Arch. (Rand.) (Passed a qualifying Exam. approved by the I.S.A.A.), c/o James W. Creasy, Esq., 4, Premco Building, Second Street, Umtali, S. Rhodesia. Applying for nomination by the Council under Bye-law 3 (*d*).

Members' Column

This column is reserved for notices of changes of address, partnerships vacant or wanted, practices for sale or wanted, office accommodation, and personal notices other than of posts wanted as salaried assistants for which the Institute's Employment Register is maintained.

APPOINTMENTS

The Research Board of the ARCHITECTS' JOURNAL has appointed **Mr. Dargan Bullivant** [*A*] to take up the Fellowship held by the late Michael Ventris [*A*].

Mr. Anthony M. Chitty, A.M.T.P.I. [*F*], has been appointed a member of the governing council of the Kumasi College of Technology, Ghana.

Mr. Charles I. Hobbis [*A*] has been appointed Head of the School of Architecture and Building at the College of Technology, Kumasi, Ghana, where he will be pleased to receive technical information from firms with experience in tropical conditions.

Mr. Lloyd Jacques Robinson [*A*], has been appointed Architect, Ghana P.W.D. and his address is now P.O. 3278, Accra, Ghana.

Mr. Alan Tate [*A*] has taken up an appointment in the Architectural Planning Department of the Central Mortgage and Housing Corporation, Ottawa, Canada.

Mr. Donald H. Tomkinson [*A*] has been appointed Lecturer in the Department of Town and Country Planning, University of Manchester, Manchester 13. Mr. Tomkinson took up his appointment on 1 January.

Mr. Anthony J. Walmsley [*A*] has been appointed to a King George VI Memorial Fellowship for 1957–58 for post-graduate study in an American University.

PRACTICES AND PARTNERSHIPS

Messrs. Bridgwater and Shepheard [*F*/*A*] of 42 Bruton Place, Berkeley Square, London, W.1, have taken into partnership **Mr. Gabriel Epstein** [*A*].

Mr. N. H. N. Darby [*A*] has taken into partnership **Mr. R. W. Rigg** [*A*]. The practice is being carried on at 1 The Centre, Weston-super-Mare, under the title of **N. H. N. Darby and Partners.**

Following the death of **Mr. L. H. Fewster** [*L*] the practice will be continued by his partners in the name of **L. H. Fewster and Partners** from the same address as before, 22 Conduit Street, London, W.1.

The partnership between **Mr. Michael D. Laird** [*A*] and **Mr. W. J. C. Redpath** [*A*] will by mutual consent be dissolved on 30 June 1957. **Mr. Laird** will continue his practice from the same address, 11 Randolph Place, Edinburgh, and **Mr. Redpath** will be taking a post abroad.

Mr. F. J. Lenton [*F*] has retired from practice. The firm of F. J. Lenton and Partners will continue at Stamford and Grantham under the remaining partners, Mr. W. J. Hemmings [*A*] and Mr. F. M. Hutchinson [*A*].

Mr. Arthur Lindsay [*A*] has taken into partnership **Mr. Max Gerlach.** The practice will be continued from P.O. Box 1648, Accra, Ghana, as **Arthur Lindsay and Max Gerlach.**

Mr. Henry Lynch-Robinson [*F*] and **Mr. R. J. McKinstry** [*A*] have by mutual consent dissolved their partnership carried on under the name of **Lynch-Robinson and McKinstry. Mr. Lynch-Robinson** will continue to practise under his own name at 7 May Street, Belfast, and **Mr. McKinstry** will practise under his own name at 58 Rugby Road, Belfast.

Mr. George S. Palejowski [*A*] has begun private practice at Norwich Union Chambers, Osborne Street, Grimsby.

Mr. John S. Pantlin, A.M.T.P.I. [*A*], has begun private practice at 'Southwold,' Oakley Road, Wimborne, Dorset (Wimborne 2132), where he will be pleased to receive trade catalogues, etc.

Messrs. L. D. Tomlinson and Partners [*F*/*A*] have incorporated in their practice the business of **Mr. Hedley A. Mobbs** [*L*], formerly of High Street, Boston, and in future the practice will be carried on as **L. D. Tomlinson and Partners, Chartered Architects and Surveyors (Incorporating Hedley A. Mobbs)** at their existing addresses, Pilgrim House Chambers, Boston, Lincs., and Quadrant Arcade, Romford, Essex.

Mr. Arthur Walker [*L*], having retired from the position of Chief Architect to British Home Stores Ltd., has begun private practice at 80 Park Road, Southport, Lancs. (Southport 56746), where he will be pleased to receive trade catalogues and samples.

CHANGES OF ADDRESS

Mr. Raymond George Absolon [*L*] has moved to 154 Bellegrove Road, Welling, Kent.

The address of **Mr. Leslie James Allward** [*A*] is now 56 Maple Avenue, Rosedale, Toronto, 5, Ontario, Canada.

Mr. Alan Blanc and Mrs. Sylvia S. Blanc [*AA*] have changed their address to Uphill House, Henley Drive, Coombe Hill, Kingston, Surrey.

Mr. Austin O. Cole [*A*] has moved his office to 51 Newnham Road, Cambridge. The telephone number remains the same (Cambridge 55101).

Mr. Robert J. Coles [*A*] has changed his address to Apt. 12, 234 San Vincente Boulevard, Santa Monica, California, U.S.A.

Messrs. Collcutt and Hamp [*F*/*A*] announce that from 18 March 1957 their office address will be 86 Prince Albert Road, Regent's Park, London, N.W.8 (PRImrose 5157).

Mr. A. L. Crookall [*A*] has changed his address to c/o P.W.D., Aden, where he will be pleased to receive catalogues, etc., from manufacturers at home and abroad.

Miss Valerie M. Currie [*A*] (Mrs. M. A. V. Matthews) has changed her address to 14 Inverleith Row, Edinburgh 4.

Messrs. Farms and Partners [*FF*] have moved their offices to 24 Welbeck Way, London, W.1. The telephone number will remain WELbeck 6543.

The address of **Mr. Arnold George Lowe Gibson** [*A*] is now 44 Cliffe Way, Warwick.

Messrs. Cecil Howitt and Partners [*F*/*AA*] of Nottingham, have opened a new office at St. Andrew's House, 48 Princess Road, Leicester (Granby 1169).

Mr. Richard Lopacki [*A*] has changed his address to c/o Messrs. Eero Saarinen and Associates, West Long Lake Road, Bloomfield Hills, Mich., U.S.A.

Mr. Howard N. Mason, A.M.T.P.I. [*A*], has moved his office to 16 Telford Terrace, Grosvenor Road, London, S.W.1 (TATe Gallery 4755).

Mr. J. D. McCutcheon [*L*] and **Mr. John Wilkinson** [*A*], practising as **Messrs. McCutcheon and Wilkinson,** have moved their Ballymena office to 34 High Street, Ballymena, N. Ireland (Telephone 6433/4).

Mr. K. Bradley Miller, T.D., Dip.Arch. (Abd'n) has opened an office at Southbank Road, Kenilworth, Warwickshire (Kenilworth 990).

Mr. Ronald H. Mobbs [*A*] has moved his office to Barclays Bank Chambers, Saffron Walden, Essex.

Mr. Keith P. Roberts [*L*] has changed his main office from 2/4 Upper Dagnall Street, St. Albans, to 17 Verulam Road, St. Albans, Herts (St. Albans 56886), and his London office from 21 Woodstock Street, W.1, to 16 Brook Street, W.1 (GROsvenor 8381–2).

Mr. H. Werner Rosenthal [*A*] has moved his office to 30B Wimpole Street, London, W.1 (HUNter 0607).

Messrs. Saise & Curtis [*A*/*L*] have changed their address to 43 Manchester Square, London, W.1 (HUNter 0682).

The address of **Mr. Peter Stevens** [*A*] is now 15 Underdown Road, Elizabeth South, South Australia.

Mr. John Toon [*A*] has moved to 59A Cavendish Road, London, N.W.6, where he will be pleased to receive trade catalogues.

Mr. John Francis Charlewood Turner [*A*] has changed his address to c/o The British Council, Apartado 1608, Camana 787, Lima, Peru.

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